Putting the Person in their Place: Effects of Physical and Social Contexts on Identity, Affiliation, and Well-Being

Thesis submitted by Matthew John Easterbrook to the University of Sussex for the qualification of Doctor of Philosophy in Psychology, December 2012

I hereby declare that this thesis has not been and will not be, submitted in whole or in part to another University for the award of any other degree.

Signature:……..

University of Sussex

Doctor of Philosophy in Psychology

Putting the Person in their Place: Effects of Physical and Social Contexts on Identity, Affiliation, and Well-Being.

SUMMARY

This thesis investigates how particular psychological motivations operate in different social and physical contexts. Through a series of four papers, it both extends and empirically tests some of the theoretical claims made by *motivated identity construction theory* (MICT, Vignoles, 2011), which proposes that people construct their identities in ways to maximise or maintain the satisfaction of identity motives for self-esteem, continuity, distinctiveness, belonging, efficacy, and meaning. Although these identity motives been found to influence identity construction at individual, relational and collective levels of self-representation (e.g. Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006), Paper 1 extends this by showing not only that identification with novel groups tracks the satisfaction of identity motives over time, but also, crucially, that different motives are related to identification with different types of groups. MICT further proposes that each of the motives can be satisfied in various ways, and that particular contexts promote and emphasise certain ways over others. Paper 2 extends this theorising to the belonging motive, showing that there are different ways that people can gain feelings of belonging from their group memberships, and that this depends on the type of groups involved. Paper 3 examines the effects of the built environment on the belonging motive, showing that physical features within flats that encourage the use of common areas increase the frequency with which flatmates coincidently meet each other. This increases their feelings of belonging associated with the group, leading, in turn, to increases in well-being. Paper 4 focuses on the distinctiveness motive and, using a large cross-cultural dataset, finds support for MICT's claims that the way the distinctiveness motive is satisfied varies according to the level of urbanisation in an individual's surrounding environment, in addition to their cultural context. The importance of incorporating social and physical contexts into psychological theories is discussed.

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF FIGURES

ACKNOWLEDGEMENTS

There are a several people I'd like to thank for their invaluable help in the making of this thesis. First and foremost, I would like to thank Viv Vignoles, my supervisor, for his show of faith in encouraging me to go for a DPhil in the first place, and for all his support, patience, and encouragement ever since. I'd also like to thank all of the people involved in the large cross-cultural project run by the Culture and Identity Research Network, without whom one of the studies in this thesis would have been impossible. Thanks especially to the main research team at the University of Sussex—Peter Smith, Rupert Brown, Maja Becker, Ellinor Owe (and, of course, Viv).

Thanks as well to all those who have helped in a less academic way to the development of this thesis. Linda Tip and Fidelma Hanrahan, in particular, have always been on hand to listen understandingly to my moans and groans, and have always been willing and able to join me for some much needed respite in the local pub. I'd also like to thank my parents, Libby and John, who have not only been incredibly supportive throughout the whole of my studies, but also helped out tremendously with some of the data collection, driving their friends mad through their pestering, all in my name. The final thank you goes to my wife, Jessica Easterbrook, whose faith in my ability and interest in my studies have been an invaluable source of support and encouragement, while her insatiable demand for holidays has ensured that I haven't abandoned life outside of academia!

INTRODUCTION AND LITERATURE REVIEW

A year or two before I began by doctoral studies, I was working in a terrible job. It was nothing like what I wanted or hoped to do, and I was rather ashamed that I worked there. I certainly didn't tell anyone who didn't explicitly ask what I did for a living, and, if I had to tell, I quickly moved on to some more positive aspect of myself. What I found curious, however, was that there were many people at this workplace who were proud to work there, who told everyone who would listen that they were a vital member of the company. While I was firm in my belief that where I worked had nothing to do with who I was, others clung to their job as a label by which to define themselves, and wore it proudly.

As I began my studies, however, I changed my mind. I now thought that what one did for a living was a very good indicator of who one was, and readily used my new 'psychologist' label to define who I was and to describe myself to others. Why was it that some of the things that people could use to define themselves were taken on readily and seen as more important, more highly valued, and more satisfying than some other possible self-definitions that were rejected? This question seems particularly important when one considers that people can use practically anything they can associate with themselves to define who they are. In an often used but illustrative quote, William James (1890/1980) claimed that "In its widest possible sense… a man's Self is the sum total of all that he CAN call his, not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bank-account. All these things give him the same emotions. If they wax and prosper, he feels triumphant, if they dwindle and die, he feels cast down…." (p 291) (see also Vignoles, Schwartz, & Luyckx, 2011). People, then, have a myriad of possible things they can use to define who they are, so why do they adopt some things but reject others?

Identity Motives

I came across several theories that proposed that possible aspects of one's identity that satisfied particular motivations would be incorporated into one's identity, while those that did not satisfy, or frustrated, the motives would be rejected or marginalised. For example, several theorists proposed that possible aspects of one's identity from which one could gain a sense of self-esteem would be

incorporated into identity (for reviews, see Gregg, Sedikides, & Gebauer, 2011; Hoyle, Kernis, Leary, & Baldwin, 1999). Others have made, and found evidence for, similar arguments proposing that people construct their identities in order to gain some sense of continuity (Chandler, Lalonde, Sokol & Hallett, 2003; Sani, et al., 2007); distinctiveness (Breakwell, 1987; Brewer, 1991; Brewer & Pickett, 1999; Vignoles, Chryssochoou, & Breakwell, 2002), meaning (Baumeister, 1991; Heine, Proulx, & Vohs, 2006; Hogg, 2000; Hogg, Siegel, & Hohman, 2011; Proulx & Heine, 2007), efficacy (Breakwell, 1993; Burke & Stets, 1999; Deci & Ryan, 2000; De Vries, Dijkstra, & Kuhlman, 1988; Ryan & Deci, 2000; Stets & Burke, 2000), and belonging (Baumeister & Leary, 1995; Bettencourt & Sheldon, 2001; Deci & Ryan, 2000; Ryan & Deci, 2000; Sheldon & Bettencourt, 2002). Thus, it seemed that a possible identity aspect might become an important part of one's identity if it satisfied certain motivations.

Motivated Identity Construction Theory (MICT, Vignoles, 2011) combines the above motivations into a single theory. MICT proposes that there are at least six *identity motives* that people try to satisfy when constructing their identities. In particular, MICT suggests that people construct their identities to maximise or maintain positive self-regard (the self-esteem motive); a feeling that they are distinguished from others (the distinctiveness motive); a sense that their past, present, and future identities are connected (the continuity motive); feelings of acceptance or inclusion by important others (the belonging motive); a sense of subjective meaning in their lives (the meaning motive); and feelings of competence and capability in influencing their environment (the efficacy motive).

Empirical research has shown that aspects of people's identities that satisfy, rather than frustrate, these identity motives are perceived as more important to their self-definitions, are associated with more positive emotions, and are enacted more often in everyday behaviours (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006). Using a prospective design spanning two months, Vignoles and colleagues found that how central participants perceived an identity aspect was to a their self-definition—reflecting a process called identity definition—was directly predicted by how much that identity aspect satisfied the motives for self-esteem, continuity, meaning, and distinctiveness. The amount that a participant showed an identity aspect to others in their everyday behaviours—labelled identity enactment—was directly predicted by how much that identity aspect satisfied the motives for self-esteem, belonging, and

efficacy. Participants also reported feeling happier about aspects of their identities that satisfied the motives for self-esteem, continuity, efficacy, and meaning. Interestingly, the processes of identity definition and identity enactment were found to be dynamically related, prospectively predicting each other across the two-month time span.

The six identity motives have also been found to influence possible future selves: possible selves that are expected to satisfy the motives are desired, whereas possible selves that are expected to frustrate the motives are feared (Vignoles, Manzi, Regalia, Jemmolo, & Scabini, 2008). Furthermore, a recent large cross-cultural study has found that these six identity motives predict identity processes among members of a large and diverse sample of cultures (Easterbrook et al., 2012). Finally, the motives have been shown to influence identity processes at the individual-, relational-, and collective-levels of self-representation (Vignoles et al., 2006). It seems, then, that people show to others and define themselves with those aspects of their identities that give them feelings of self-esteem, continuity, distinctiveness, meaning, belonging, and efficacy.

As well as the above research into MICT, Vignoles and colleagues (Becker et al., 2012a; Vignoles, 2009; Vignoles, Chryssochoou, & Breakwell, 2000, 2002) have investigated the *ways* that different identity motives can be satisfied. In particular, they have argued that people can distinguish themselves, and thus satisfy the distinctiveness identity motive, by incorporating aspects into their identities that give them a sense that they are either (a) *different* from others in terms of their personal qualities and characteristics, (b) *separate*, distant, or bounded from others, and/or (c) associated with particular *social positions*, including friendship and family ties, roles, and social statuses. These three sources of distinctiveness have been found to predict general feelings of distinctiveness through research with Anglican parish priests (Vignoles et al., 2002), and in a large cross-cultural study (Becker et al., 2012a).

This theory and research helps to explain why certain identities are particularly important to self-definitions, and why some are presented to others more often. Nevertheless, the above review suggests a generalised view of identity, offering an underlying set of motivations that are thought to influence identity processes across different contexts and times. However, the theoretical side of MICT owes a debt to symbolic interactionism, suggesting that identity is constructed within social contexts that have their own local meaning systems (see also

Greenwald, 1980; Marková, 1987; Markus & Wurf, 1987; Mead, 1934; Reicher, 2000; Vignoles, 2011; Vignoles et al., 2006), implying that the evaluation of identity aspects will vary according to the surrounding context.

Symbolic interactionism proposes that people have many social selves, which are created, maintained, and developed through interactions with others. In particular, both Mead (1934) and Cooley (1902) stressed the role of groups that involve intimate, face-to-face relationships as arenas in which we come to understand and define ourselves through perceiving and internalising the perspectives of others within our groups. Thus, as we first enter a new social context, the identities we portray to others are evaluated by our interaction partners within our social groupings. We then internalise our perceptions of these evaluations, and thus come to re-evaluate our own identities. It follows that as our interaction partners change with the social context we are in, the amount that particular identity aspects are positively valued, distinct, meaningful, continuous, efficacious, and promote feelings of belonging will change too. As the above research on MICT suggests, this would then cause a reshuffle in our subjective identity structures as we give priority to those identity aspects that best satisfy the six identity motives in the new context.

As I began to read more into the literature on self and identity, I discovered that this idea underpins much psychological research into self and identity. Perhaps the most striking example of this is that such a large proportion of experimental research into identity creates identity threat by placing participants in a situation where their identity is not socially valued (e.g. Barreto, Ellemers, Scholten, & Smith, 2010; Pickett, Bonner, & Coleman, 2002; Swann, Pelham, & Krull, 1989). Reflecting this, researchers are increasingly coming to the conclusion that identity is best thought of as a dynamic process, both influencing, and being influenced by, the social context. For example, research has shown that the content of a social group's identity (norms, values, etc) can influence its members' personal identities (Baray, Postmes, Jetten, 2009; Postmes, Spears, Lee & Novak, 2005; Swann, Gomez, Seyle, Morales, & Huici, 2009) and self-reported personality (Reynolds et al., 2012), whereas the enactment of personal identities by in-group members can influence the content of the identities of social groups (Postmes et al., 2005). Furthermore, there is evidence that the social structural conditions of the context within which identities become salient can influence the content and utilisation of those identities, and their

relationship to each other (S. A. Haslam, Turner, Oakes, McGarty, & Hayes, 1992; Stott & Drury, 2004; Swann & Read, 1982).

In an empirical example of this, Ethier and Deaux (1994) studied Hispanic students' re-mooring of their ethnic identity as they entered an Anglo university. They found that students whose ethnic identity was initially important to them sought out and entered small, interactive groups in which they could enact their ethnic identities, such as organised Hispanic groups that promoted and encouraged activities associated with their Hispanic heritage. Thus, for participants whose ethnic identity was important, they sought out social groups which highly valued their established identity. Participants whose ethnic identity was less important to their sense of self, however, did not seek out such groups. Thus, the social groups that they became involved in did not value their ethnic identities, which consequently became more marginalised in their self-definitions, weakened in strength, and were perceived to be more under threat within this new context. Thus, a person's identity can influence who they interact with in a particular context, while their interactions can influence their identity.

The Cultural Context

Linking cross-cultural psychology with this symbolic interactionist perspective, Kashima (2000) has argued that cultural influence is passed on mainly through the behavioural interactions between individuals. He has shown that, over time, interactions between members of a culture come to emphasise normative, stereotype-consistent information, but deemphasise non-normative, stereotype-inconsistent information, suggesting that interactions reinforce cultural norms. Indeed, a vast body of research has shown that culture can influence the self (e.g. Hofstede, 1980; Markus & Kitayama, 1991; Triandis, 1995).

Research into MICT has directly linked an individual's surrounding culture to identity processes. Adopting a middle ground between arguments suggesting that identity motives are culturally relative (e.g. Breakwell, 1987; Heine, Lehman, Markus, & Kitayama, 1999 ; Triandis, 1995), and those that suggest identity motives are universal (e.g. Brewer, 1991; Sedikides, Gaertner, & Toguchi, 2003), MICT suggests that identity motives are *culturally flexible universals*: universal motivations that can be satisfied in culturally relative ways (Becker et al., 2012a; Vignoles, 2009, 2011; Vignoles et al., 2000). A study by Becker and colleagues (2012a) found support for this within a large cross-cultural study that investigated differences in the

strength of the distinctiveness motive, and in the relative importance of difference, separateness, and social position to its satisfaction. Using data from 4,751 participants from 21 cultural groups, Becker and colleagues conducted multilevel modelling to investigate whether the distinctiveness motive varies with an individual's values and beliefs, and/or the dominant values and beliefs that were prevalent within an individual's surrounding cultural context. Their results showed that distinctiveness strivings influenced identity processes across all their studied cultures, and that there was very little variation in the strength of the distinctiveness motive due to individual differences. However, the motive was slightly stronger for people within more collectivistic cultural contexts. They also found that individuals constructed feelings of distinctiveness relatively more through difference and separateness within individualistic cultures, but relatively more through social positions within collectivistic cultures. Again, it was the differences in the dominant values and beliefs within the cultural climate, rather than any individual differences, that accounted for this variation.

In further analyses from the same cross-cultural study, Becker and colleagues (2012b) investigated how the self-esteem motive was satisfied across 4,852 adolescents across 20 cultural samples. They again used multilevel modelling to show that it was differences in the values prevalent within an individual's surrounding cultural context that moderated how self-esteem was constructed, rather than any individual differences in values: self-esteem was derived especially from aspects of identity that matched the value priorities within an individual's surrounding culture. This research shows directly that the cultural context can influence identity processes, and that it is indeed the context, rather than any individual differences, that account for most of the variation in these identity processes.

One important difference between cultures is how social groups are conceptualised (e.g. Triandis, 1995; Yuki, 2011). Drawing on a distinction often made within the psychological literature between network groups and social categories—an area I expand on in the next section—Yuki (2003, 2011) has argued that East Asian cultures, traditionally viewed as collectivist, perceive groups not as collective wholes, but as a network of interpersonal relationships, whereas Western cultures, traditionally viewed as individualist, conceptualise groups as depersonalised wholes. Indeed, he found that, for participants in Japan, in-group identification and

loyalty were predicted by their knowledge of the other group members and interconnections between them. However, for participants in America, in-group identification was predicted also by categorical factors, such as perceptions of group homogeneity and status. Thus, it seems that cultural differences in identity processes (in this case, identification) may be caused by cultural differences in how social groups are conceptualised. However, the way that social groups are conceptualised is likely to vary within cultures as well as between cultures, an area which I elaborate on in the next section.

Social Groups

"The type and degree of contact among the members, the functions of the group, and the goals of the group will determine how and why its influences are exerted" (Festinger, Back, & Schachter, 1950, p3).

Social psychologists have known for a long time that people's memberships in social groups can become part of their self-concept and consequently influence how they see themselves and the world (Tajfel & Turner, 1979). For example, identification with a social group has been shown to affect cognitions (e.g. Pickett, Silver, & Brewer, 2002; Sherman, Castelli, & Hamilton, 2002), affective evaluations (e.g. Brewer, 1999; Prentice, Miller, & Lightdale, 1994), and behaviour (e.g. Livingstone, Haslam, Postmes, & Jetten, 2011; Steinel et al., 2010), and evidence has suggested that people can base their prejudices (Brown, 2011) and friendships (Hogg, CooperShaw, & Holzworth, 1993) upon group memberships alone. More recently, evidence has demonstrated the large benefits to psychological health that can be gained by identifying with social groups (e.g. C. Haslam et al., 2010; Jones & Jetten, 2010). It is therefore essential for psychologists to understand how identity processes relate to social groups.

The conceptions, dynamics, and functions of groups can be diverse (Hamilton & Sherman, 1996; Lickel et al., 2000; Prentice et al., 1994), and a distinction is often made in the psychological literature between interpersonal network groups (or common bond groups) and social categories (or common identity groups), with theorists arguing that different processes may underlie identification and attraction to these different types of groups (Deaux & Martin, 2003). Identifying with a social group is an identity process where group memberships become assimilated into one's self-concept (Amiot, de la Sablonnière, Terry, & Smith, 2007; Turner, Oakes, Haslam, & McGarty, 1994, Tajfel & Turner, 1979) and hence influence people's

behaviour (e.g. Postmes, Haslam, & Swaab, 2005). Thus, motives that have consistently been shown to influence identity construction processes seem particularly appropriate concepts for the study of social identification and group belonging. Indeed, as the above review indicated, the six identity motives have been shown to influence identity processes at the group level of self-representation (Vignoles et al., 2006, Study 2), suggesting that people will identify most strongly with group memberships that best satisfy the motives, whereas they will identify less, if at all, with group memberships that frustrate the same motives. Furthermore, MICT claims that identity motives can be satisfied in different ways depending upon the meaning systems within local, social, and cultural climates (Vignoles, 2011), and it may be the case, therefore, that different types of social groups provide their members with feelings of belonging in different ways.

Social Categories. The dominant conceptualisation of social groups within psychology is as social categories, which are founded upon shared characteristics. These shared characteristics form the basis for perceiving people as similar or connected in some important respects, and thus as part of the same category, but different from members of other, related categories (Deaux & Martin, 2003; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; Yuki, 2003). These types of groups are often both abstract and sparse, such as nationality or political affiliation, with most members rarely, if ever, coming into close contact. This conception of groups is rooted in the social identity approach, consisting mainly of social identity theory (SIT, Tajfel & Turner, 1979) and self-categorisation theory (SCT, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Of particular importance here, SCT provides a theoretical framework for explaining when people come to self-categorise: to perceive and hence define themselves and others (who can be either real or imaginary, proximal or absent) in terms of their group memberships, rather than as individuals.

Self-categorisation occurs when several conditions are met. The first of these is that the person must be ready to categorise themselves and others in terms of a particular category. Turner and colleagues (1994) suggest that a person's readiness can be due to past experiences, or contextually salient values, goals, and/or motives. As self-categorisation is essentially a process of coming to define the self as a interchangeable exemplar of a homogeneous category, identity motives are likely to influence the readiness of an individual to utilise a particular categorisation. Thus,

motives that have consistently been shown to influence the centrality of particular identity aspects to one's self-definition—the process of identity definition—seem particularly likely to influence this readiness potential. This is particularly relevant to the above research into MICT, which found that identity aspects that satisfy the motives for self-esteem, distinctiveness, continuity, and meaning were most central to people's self-definitions (Vignoles et al., 2006). Thus, people may have a greater readiness to define themselves in terms of a social category if that category satisfies these particular motives.

Indeed, these motivations have been found to increase the extent to which people will define themselves in terms of, and identify with, a particular social category, suggesting that the satisfaction of these motives increases the person readiness to perceive themselves in terms of a particular social category. Researchers have argued that strivings for self-esteem (Abrams & Hogg, 1988) and distinctiveness (Brewer, 1991) motivate people to identify with social categories, and research has demonstrated that people both seek to become members of, and identify with, social categories that are distinctive (Brewer & Pickett, 1999; Vignoles et al., 2006), and those that are positively valued (e.g. see Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999). Other theorists have argued that some sense of continuity across time is necessary for a coherent and meaningful identity (Chandler, et al., 2003; Taylor, 1989; Wiggins, 2001), and research has suggested that collective continuity is important for groups (Sani et al., 2007). Consistent with the view that people strive for a sense of subjective meaning in their self-definitions (Baumeister, 1991; Heine, Proulx, & Vohs, 2006; Proulx & Heine, 2007), research has shown that people gain subjective meaning and reduce self-uncertainty by identifying with social groups (Hogg, 2000; Hogg et al., 2011). Thus, a person's readiness to define who they are through their social category memberships seems to be dependent upon how much those social categories satisfy the motives for meaning, distinctiveness, continuity, and self-esteem; the motives that MICT has identified as being particularly relevant to identity definition processes.

The other necessary condition for self-categorisation to occur is that a particular categorisation must 'fit' with the current context, which can be further broken down into comparative- and normative-fit. Comparative fit is based upon the metacontrast principle, which suggests that a collection of people will be seen as a group or entity when the differences within the category outweigh the differences

between that category and a relevant alternative category on a contextually salient domain. Normative fit refers to the match between the perceiver's normative expectations of how a category should be, and how the category actually is. Self-categorisation in terms of a social category is more likely when the match between normative expectations of that category and the actual situation are close. When these conditions are met, people perceive category members including the self not as individuals, but as depersonalised and interchangeable exemplars of a homogeneous group. This promotes self-stereotyping, whereby category members see themselves as prototypical members of the social category (Turner, et al., 1987).

Optimal distinctiveness theory (Brewer, 1991) proposes that this categorical perception, where group members are perceived, not as individuals, but as depersonalised and interchangeable exemplars of a homogeneous group, is the basis for feelings of belonging that are gained from memberships within social categories. ODT, which is again rooted in the social identity approach, suggests that social identities result from a tension between the motivations for belonging and distinctiveness. According to ODT, feelings of belonging are gained from inclusion and immersion within large and inclusive groups, while feelings of distinctiveness are gained from intergroup comparisons, with smaller groups providing greater feelings of distinctiveness (see also Vignoles & Moncaster, 2007). People are expected to identify most with medium sized groups that are thought to provide the best opportunity to experience simultaneous feelings of intragroup belonging and intergroup distinctiveness.

Supporting ODT's notion that the cognitive processes outlined by SCT are linked to feelings of group belonging, research has found that experimentally threatening participants' membership within groups can lead to strivings to reaffirm their membership through heightened perceptions of group homogeneity (Pickett, Bonner, & Coleman, 2002), self-stereotyping (Pickett & Brewer, 2001), and increased perceptions of in-group size (Pickett, Silver, & Brewer, 2002). Furthermore, research has shown that such categorical perception leads to depersonalised—as opposed to interpersonal—attraction, where more prototypical group members are liked more than less prototypical members (Hogg & Hains, 1996; Hogg et al., 1993), suggesting that prototypical group members may feel more belonging. These cognitive processes have also been directly linked to feelings of belonging, with evidence showing that people feel most included within larger and

thus more depersonalised groups (Badea, Jetten, Czukor, & Askevis-Leherpeux, 2010), and that people with a strong need to belong can show greater in-group favouritism (Vignoles & Moncaster, 2007) and have heightened perceptions of the amount of national consensus in line with their opinions, which can also be increased through priming fears of rejection (Morrison & Matthes, 2011). Thus, the social identity perspective suggests the antecedents to feelings of belonging are cognitive perceptions of intragroup similarity: self-prototypicality and group homogeneity.

Interpersonal Network Groups. In contrast to the above psychological perspective on groups is an alternative rooted within sociology, and, in particular, in symbolic interactionism. This perspective conceptualises groups as based fundamentally on face-to-face interactions between the members, and whose function it is to provide an arena within which people can enact their social roles and come to understand and evaluate themselves (Cooley, 1902; Mead, 1934; Serpe & Stryker, 2011). Lewin (1939) also worked with this definition, as Schellenberg (1978) points out, "[According to Lewin…] …A group is therefore not basically a collection of individuals; it is rather a set of relationships involving individuals. It is the interdependence found in these relationships that constitutes the groups, not the characteristics of individual members." (p79).

Many social psychological theories have recognised the importance of small groups to our identity and self-evaluations. For example, Festinger's (1954) social comparison theory suggests that people are driven to evaluate their opinions and abilities, and, in the absence of objective indicators of the worth of particular opinions and abilities (as is taken to be the case most often), people evaluate themselves in comparison with close others. Furthermore, Festinger states:

> Small social groups occupy a strategic position as determiners of the behaviours and attitudes of their members. Because attitudes and behaviour patterns are communicated or learned from other people, it is plausible to suppose that face-to-face communication among members of a social group would be a method through which much of the development of these attitudes and behaviour patterns would occur. (p3).

This highlights the importance of the social context to our sense of who we are and suggests that we need others to evaluate our opinions.

Higgins' self-discrepancy theory (1987; 1989) also suggests that the perceived views of others can influence one's sense of self. Indeed, research has shown that people's affective states can be influenced more by others' perceptions of their self-discrepancies than by their own (Gonnerman, Parker, Lavine, & Huff, 2000). Furthermore, if people are labelled in a way that they deem inappropriate, they actively resist, attempt to demonstrate how inappropriate and useless such a label is, and emphasise other aspects of their identity (Barreto & Ellemers, 2009). Similarly, if an important part of an individual's self is neglected by a group they are in, then people strive to present themselves in ways that reaffirm that aspect of their self as well as reducing their loyalty to the group (Barreto & Ellemers, 2009). People also behave in ways designed to elicit reactions from others that confirm their identities (Swann & Read, 1981), prefer interaction partners that see them as they see themselves, even if this is negative (Swann, Pelham, & Krull, 1989), and like others who confirm their self-views more than those who don't (Swann, Rentfrow, & Guinn, 2003). Thus, the social context can have an strong influence upon identity processes.

Small groups that are based upon interactions are thought to be perceived as a set of interpersonal relationships rather than a collective whole (Harb & Smith, 2008), and are argued to be based upon interdependence (Lewin, 1939; Wilder & Simon, 1998), intimacy (Lickel et al., 2000), and interactions among the members (Deaux & Martin, 2003). Furthermore, members of network groups often occupy specific roles (Serpe & Stryker, 2011; Stets & Burke, 2000), which individualise and distinguish the members from each other (Hornsey & Jetten, 2004; Jans, Postmes, & Van der Zee, 2011), inhibiting perceptions of intragroup similarity that are commonly associated with memberships within social categories (e.g. Turner et al., 1994). Newly formed interpersonal network groups often lack a well-defined group identity, so that group members only come to see themselves as a group and develop a common social identity through their behavioural interactions (Postmes, Spears, Lee & Novak, 2005). This suggests that new interpersonal network groups may become identified with, and hence become more important to people, depending upon how satisfying the behavioural interactions between the members are, rather than on how satisfying a self-definition the group's identity offers. Thus, identity enactment processes may be primarily involved when people first identify with an interpersonal network group, and feelings of belonging associated with these types of

groups are likely to be based upon how satisfying the interpersonal relationships are that occur within the group, rather than any perceptions of the group as a whole.

The motives associated with identity enactment processes—self-esteem, belonging, and efficacy—have been found to be involved in the identity enactment processes implicated in interpersonal network groups. Self-presentation research suggests that people strive to gain feelings of self-esteem through social interactions (Schlenker, 2003), and sociological research suggests that self-esteem is achieved through people's behavioural enactments of their roles within small, interpersonal groups (Burke & Stets, 1999; Stets & Burke, 2000). Self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000) suggests that the needs for relatedness and competence—similar concepts to belonging and efficacy—are satisfied through people's behaviour, and others argue that both belonging (Baumeister & Leary, 1995; Bettencourt & Sheldon, 2001) and efficacy (Burke & Stets, 1999; De Vries et al., 1988; Stets & Burke, 2000) can be satisfied through the performance of social roles within interpersonal networks. Furthermore, people commit more strongly to groups that provide them with greater feelings of interpersonal relatedness, a concept synonymous with belonging (Sheldon & Bettencourt, 2002). It seems, then, that groups based upon the interactions between the members provide a context within which identity enactment processes are at work, as members enact their social roles and form relationships with each other.

Feelings of belonging derived from groups that are based upon behavioural interactions and construed as a set of relationships (Harb & Smith, 2008) are likely to be based upon the relationships among the individual group members, rather than any cognitive perceptions of the group as a whole. Baumeister and Leary (1995) conducted a comprehensive review of evidence convincingly demonstrating that feelings of belonging are gained through relationships characterised by both frequent contact and strong emotional bonds. Further evidence suggests that people gain greater satisfaction from their relationships when they are characterised by intimacy (Collins & Read, 1990; Hays, 1984) and interdependence (Whitton & Kuryluk, 2012), and when interactions are frequent (Kline & Stafford, 2004; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). This maps onto the above conceptualisation of network groups, suggesting that intimacy, interdependence, and frequent interactions may be the antecedents to feelings of belonging associated with both relationships and network group memberships.

The Physical Context

The Built Environment. As the above quote by Festinger suggests, face-to-face interactions are key to how people form, develop, and evaluate their opinions and attitudes. As network groups are based upon the social interactions between members, then factors that influence the quality and quantity of those interactions are likely to influence the formation of such social groups. Furthermore, as interactive social groups have been shown to have positive benefits to well-being (e.g. C. Haslam et al., 2010; Sani, 2012), it follows that factors which inhibit the formation of network groups could indirectly and negatively affect the well-being of potential group members.

Almost all of our social interactions take place within the built environment. It is obvious that physical structures can influence our patterns of social interactions; I may be sitting only a few feet away from someone, but, if there is a wall between us, it is very unlikely that we will interact, especially face-to-face. Thus, physical space and structures must have the power to influence our social interaction and hence our relationships and identity. Indeed, this does appear to be the case. For example, researchers have shown that people who live in communities in which there is a communal space which people use, and therefore come into contact with each other, have a higher level of neighbourhood social ties than people within communities in which common spaces are not used (Kou, Sullivan, & Coley, 1998). Not only this, but the layout of physical spaces can also influence these things. For example, defensible spaces (Newman, 1973) are spaces around shared housing that convey a sense of territory to those living together, such as a symbolic or physical marker of a shared space. Buildings that have defensible spaces have been shown to promote policing of the area by the residents, increase community participation, and decrease crime, suggesting they can promote a shared sense of 'us' between those who share the territory designated by symbolic boundary markers.

More recently, studies have begun to identify particular physical structures within the built environment that can influence the connections between residents. Perkins and colleagues, for example, (1990) found that people were less likely to participate in community activities if they had barriers—such as fences or hedges—on their property, suggesting that privacy structures can decrease people's connections to their community. Another example comes from a study by Speller, Lyons, and Twigger-Ross (2002) into the relocation of a traditional English mining

village. The old village consisted of five rows of terraced houses with no front gardens or dividing barriers so that the residents often came into contact with each other as soon as they left their homes. The new village had many more privacy structures, consisting of semi-detached houses surrounded by high-fenced gardens that decreased the visibility of the residents to each other and their opportunities to interact. Many of the residents complained that the move to the new village eroded the strong sense of community and increased their sense of isolation, suggesting that structures that inhibit face-to-face meetings can erode the bonds between residents.

A more direct test of how the physical environment can influence interaction was conducted by Festinger, Schacter, and Back in 1950. They found that residents of university flat blocks were more likely to be friends if they lived physically, but also functionally, closer to one another. Functional distance is the likelihood that one resident will meet another as they go along their daily paths. For example, Festinger and colleagues found that people who had to pass the entrances of others' homes in order to reach their own received more friendship ratings from other residents than did those who could enter their homes directly from the street. Festinger and colleagues explained their findings by suggesting that the built environment can structure people's movements and facilitate coincidental meetings between people, which can then develop into interpersonal relationships (see also Greenbaum, 1982, Kuo, Sullivan, Coley, & Brunson, 1998). Incorporating this with the above literature on symbolic interactionism, this suggests that the physical environment can have an influence upon our sense of self and identity through its impact upon our behavioural interactions.

Festinger and colleagues' (1950) argument that functional distance, rather than mere physical proximity, is the key to understanding how the built environment can facilitate friendship formation has also received support from a study by Ebbesen, Kjos, and Konecni (1976). They found that, while the physical distance between people's homes predicted both positive and negative friendship ratings, only the positive friendship ratings were related to the number of times the residents saw each other socially. This suggests that face-to-face meetings act as a catalyst for friendship formation, offering an explanation of why the use of communal residential areas leads to increases in community cohesion and social ties (Kou, et al., 1998). In another example of how the physical design of residences can influence identity and group processes, Baum and Davis (1980) conducted an architectural intervention by

inserting a wall in the middle of several long corridors within student housing, splitting each corridor into two shorter ones. They found that groups were more likely to develop within the short corridors, and that this was related to lower levels of crowding stress. Research on institutionalised patients has found that simply rearranging furniture in a way that encourages hospitalised patients to interact, such as arranging chairs to face each other in close proximity, can decrease isolated behaviours and increase social interaction (for a review see Evans, 2003).

Research from a range of other traditions has also found face-to-face meetings to be important for the development of interpersonal connections. For example, having face-to-face meetings has been shown to be a significant predictor of whether siblings consider themselves to be close friends in later life, suggesting there are profound long term effects (Connidis, 1989). Experimental evidence found that dyads who interacted in a face-to-face setting were more likely to cooperate in conflict resolution settings than those who interacted without seeing each other's faces (Drolet & Morris, 2000). Furthermore, this effect was mediated by dyadic rapport, suggesting that face-to-face meetings can increases the sense of connection between people, which, in turn, can lead to more pro-social cooperative behaviour. The potential positive effects of face-to-face contact are also well documented by research on the contact hypothesis, where substantial evidence has found that the right kinds of contact between members of different groups can reduce prejudice and increase positive feelings and empathy towards members of out-groups (for reviews, see Pettigrew & Tropp, 2006, 2008).

Leading on from this, research consistently demonstrates that high-quality interpersonal relationships are positively related to increased psychological functioning and well-being. Research from self-determination theory consistently finds that satisfying the basic human need for relatedness increases psychological well-being (for a review, see Ryan & Deci, 2000), and other research has shown that similar effects are gained from satisfying the need to belong (Baumeister & Leary, 1995; Leary, 1990; Macdonald & Leary, 2005; Maslow, 1970). More directly, empirical evidence indicates the benefits to health and well-being that are gained from memberships within social groups and interpersonal relationships (C. Haslam et al., 2010; S. A. Haslam, Jetten, Postmes, & Haslam, 2009; Sani, 2012). Hence, if physical structures within the built environment can influence the patterns of

interactions between new residents of shared accommodation, then this could influence their interpersonal connections and hence their well-being.

Urbanisation. It seems, then, that the local physical environment can influence identity and group processes. However, the physical environment people live in is not just composed of their immediate residence, but also includes the larger built environment as well, such as the village, town, or city within which they live. Urban theory proposes that a change from rural to urban living modifies the ways that people interact with each other, and changes the meanings and patterns of interpersonal connections (Durkheim, 1893/1964; C. S. Fischer, 1973; Wirth, 1938). Hence, from a symbolic interactionist perspective, it follows that the level of urbanisation within an individual's surrounding environment may influence their identity processes. Indeed, several theorists have argued that urbanisation can alter the way that people distinguish themselves from each other (Baumeister, 1986; Kashima et al., 2004; Speller, Lyons, & Twigger-Ross, 2002; Vignoles, 2009), implying that the way the distinctiveness identity motive is satisfied may be influenced by urbanisation.

The small size of rural communities, for example, means that residents within a village are likely to know each other personally, making them recognisably accountable for their actions. This creates strong pressures to conform, and discourages displays of personal uniqueness (Baumeister, 1986; Durkheim, 1893/1964; Tönnies, 1887/1957), as contemporary evidence has shown (Yamagishi, Hashimoto, Li, & Schug, 2012). Furthermore, low levels of residential and social mobility (Sassen, 1998) mean that families tend to stay together and become associated with particular occupations, social ties, and social statuses within the community, which are often passed down through the generations (Baumeister, 1986). Such stability and long lasting social ties create a strong sense of duty towards the community and this fosters a strong collective focus (Durkheim, 1893/1964; Tönnies, 1887/1957). The result of these social conditions is that people are likely to be defined by the social positions they occupy within the community (Baumeister, 1986; Kashima et al., 2004). Moreover, as these identities are often ascribed to people from birth, it is unnecessary for people to strive to distinguish themselves through difference or separateness, which, in any case, may be discouraged in such communities (see also Vignoles, 2009). Thus, applying this to MICT's work on the distinctiveness motive, it may be that, within rural areas,

feelings of distinctiveness will be gained relatively passively through the salience of people's social positions.

The social conditions characterised by urban living, however, change the meaning and patterns of these interpersonal connections, and decrease the salience of social positions. For example, higher residential and social mobility within urban areas (Sassen, 1998), along with the reduced importance of the family (Baumeister, 1986), weakens conformist pressures and erodes the connections between people (Durkheim, 1893/1964; Wirth, 1938). This, in turn, decreases the visibility and thus accountability of individuals, making personal displays of uniqueness more acceptable in urban areas (Yamagishi et al., 2012), but also increasing feelings of anonymity, separation, and alienation (C. S. Fischer, 1973; Simmel, 1903/1957). Occupations undergo a similar shift in meaning, not only losing their associations with specific families, but also their individuating nature as the demands of a dense urban population require several people to occupy each role (Baumeister, 1986; Durkheim, 1893/1964). People are no longer provided with distinguishing social positions, and are faced with the task of filling up their now "empty selves" (Cushman, 1990) in ways that distinguish them from others (Baumeister, 1986), necessitating a more individual focus (Wirth, 1938). In more urban areas, therefore, it may be that feelings of distinctiveness are gained less from the social positions people associate themselves with, and more through self-definitions that distinguish them as being different or separate from others. Moreover, as distinctiveness is no longer passively achieved through inherited social positions, and people have to strive actively to distinguish themselves (Cushman, 1990), it may be that this is manifested in a stronger distinctiveness motive among those living in more urban areas.

Overview of Research

In the above review, I have described how different types of social groups, as well as the cultural-, social-, and physical-context may influence patterns of social interactions and identity processes. I investigated these ideas in three studies (see Appendices for questionnaires) conducted over the last three years, which are presented here as four separate papers. Papers 1-3 are based upon on-line questionnaire studies that I designed and carried out with the help of my supervisor . Paper 4, however, is based upon a large cross-cultural questionnaire study, which involved around eighty collaborators from across the world. I was an active member

of the primary research team on this project, who were responsible for the theoretical hypotheses, physical questionnaires, data collection, data input, and statistical analyses. Of the several papers that have resulted from the project so far (Becker et al., 2012a, 2012b; Owe et al., 2012; Paper 4 of this thesis), the order of the first few authors reflects their involvement in the theoretical development of the paper, the statistical analysis, and the writing.

Within this thesis, Paper 1 investigates changes in identity that occur both within-individuals and over time during an important life transition. As life transitions, and especially the move to university, have been argued to be particularly useful events within which to study social psychological processes (Iyer & Jetten, 2011; Jetten, Iyer, Tsivrikos, & Young., 2008), Paper 1 assesses the identity processes of new university students. The study uses a five-wave longitudinal design, with data collection beginning within the first week of students' stay at university and continuing throughout the whole of the first 10-week term of a new academic year. Thus, the study investigates the identity motives involved when people incorporate new identities into their self-concept immediately after a move into a new social context. Furthermore, the study elaborates on MICT by investigating if different identity motives are involved when people identify with both a new network group and a novel social category.

Based upon the above literature, I designed and tested new predictions about which identity motives predict changes in participants' identification with two types of groups: interpersonal networks and social categories. As expected, multilevel analyses showed that identity motives involved especially in identity enactment processes—self-esteem, belonging, and efficacy—significantly predicted within-person changes in participants' identification with their interpersonal network group of flatmates. In contrast, motives involved especially in identity definition processes—meaning, self-esteem, and distinctiveness—significantly predicted within-person changes in participants' identification with their halls of residence; an abstract social category. Thus, the results suggest that people identify with newly formed interpersonal network groups if their behavioural interactions with the group members provide them with a sense of efficacy, belonging, and self-esteem. In contrast, new members of established social categories identify with the category if they associate the group membership with feelings of meaning, self-esteem, and

distinctiveness. This extends the literature by showing that different identity motives are involved when people identify with different types of social groups.

Paper 2 further elaborates upon the distinction between social categories and interpersonal network groups, this time using a prospective two-wave longitudinal design to investigate how feelings of belonging are gained from memberships within different types of groups. Paper 2 uses multilevel structural equation modelling to investigate the antecedents to feelings of belonging that participants gain from their memberships within multiple network groups and social categories. As predicted, feelings of belonging associated with participants' memberships within interpersonal network groups were prospectively predicted by the quality and quantity of the interpersonal relationships with their fellow group members. In contrast, but in line with predictions, feelings of belonging associated with social categories were prospectively predicted by perceptions of intragroup homogeneity and prototypicality, as well as the relationships between the members. This extents the literature by taking MICT's conceptualisation of the belonging motive to a more fine-grained level, empirically showing that feelings of belonging can be constructed differently depending upon the type of group that one is focusing on.

Paper 3 investigates how the built environment within a new physical context can influence small group formation and well-being. Based upon the same five-wave longitudinal study as Paper 1, Paper 3 investigates how the physical design of shared student accommodation affected the frequency of unplanned face-to-face meetings between new roommates, and how this influenced their interpersonal bonds and psychological well-being. Multilevel latent growth modelling revealed that flats with design features that encouraged the use of communal areas—the presence of a shared common area and the absence of ensuite toilets—increased the frequency of unplanned face-to-face meetings between roommates. Consistent with symbolic interactionism, which highlights the importance of behavioural interactions within face-to-face groups to our sense of self, this predicted the development of feelings of belonging through interpersonal bonds between roommates, which, in turn, predicted their well-being. This extends the literature by demonstrating the mechanism through which the physical environment can influence people's well-being, highlighting the influence that the physical context can have on group formation.

Paper 4 extends the results of Becker and colleagues (2012a) using a larger and more diverse cultural sample of adults, as well as extending MICT's theorising

on the distinctiveness motive by investigating how the level of contextual urbanisation can influence its strength and how it is satisfied. Moreover, Paper 4 makes an important theoretical advance by assessing I-C and urbanisation at the local-level, rather than the national level. Researchers have questioned the common assumption that nations represent cultural units (Baskerville, 2003; House & Javidan, 2004; Tung, 2007; but see Minkov & Hofstede, 2012), and many studies have found within-nation differences on many cultural phenomena (e.g. Debies-Carl & Huggins, 2009; Kashima et al., 2004). Indeed, recent evidence by Plaut, Markus, Treadway, & Fu (2012) found that there were important differences between two US cities regarding social norms, cultural products, and dominant discourses, and that this was reflected in residents' self concepts, suggesting that the local context may be an important source of variation to residents' self concepts. Using multilevel modelling, Paper 4 simultaneously investigates the influence of individual-, local-, and national-level moderators of the strength of the distinctiveness motive, and the relative importance of the three sources of distinctiveness to its satisfaction. While the motive did vary according to individual-level moderators, Paper 4 directly shows the importance of the local context to identity processes.

PAPER 1: Different Groups, Different Motives: Identity Motives Underlying Changes In Identification With Novel Groups.

Matt Easterbrook and Vivian L. Vignoles
University of Sussex

Reference:
Easterbrook, M. & Vignoles, V. L. (2012). Different groups, different motives: Identity motives underlying changes in identification with novel groups. *Personality and Social Psychology Bulletin, 38*, 1066-1080.

Abstract

Social identity research has consistently shown that identifying with social groups has wide-reaching implications, yet, there is little consensus about what motivates people to do so. We integrate motivated identity construction theory with recent research into social identity to develop new predictions about which motives predict changes in participants' identification with two types of groups: interpersonal networks and social categories. We investigated social identity processes among 268 new university residents in a longitudinal study across five time points. As expected, multilevel analyses showed that motives involved especially in identity enactment processes—self-esteem, belonging and efficacy—significantly predicted within-person changes in participants' identification with their interpersonal network group of flatmates. In contrast, motives involved especially in identity definition processes—meaning, self-esteem, and distinctiveness—significantly predicted within-person changes in participants' identification with their halls of residence, an abstract social category. We discuss the implications for research into identity motives and social identity.

Introduction

Social psychologists have known for a long time that people's memberships in social groups can become part of their self-concept and consequently influence how they see themselves and the world (e.g Tajfel & Turner, 1979). For example, identification with a social group has been shown to affect cognitions (e.g. Pickett, Silver, & Brewer, 2002; Sherman, Castelli, & Hamilton, 2002), affective evaluations (e.g. Brewer, 1999; Prentice, Miller, & Lightdale, 1994), and behaviour (e.g. Livingstone, Haslam, Postmes, & Jetten, 2011; Steinel et al., 2010), and more recent evidence has demonstrated the large benefits to psychological health that can be gained by identifying with social groups (e.g. C. Haslam et al., 2010). Given these wide reaching effects, it is vitally important to get a clear understanding of the underlying motivations that are involved when people identify with social groups.

Here, we investigate the *processes* involved when people identify with social groups. Specifically, we examine how within-person changes over time in the satisfaction of six *identity motives* predict concurrent changes in social identification with two novel social groups. Furthermore, by integrating motivated identity construction theory (Vignoles, 2011) with recent research into social identification (e.g., Amiot, Terry, Wirawan, & Grice, 2010; Johnson et al., 2006), we propose that

there are different identity motives involved in identifying with interpersonal network groups compared to more abstract social categories, reflecting the different identity processes that are involved. We test these predictions in the context of a 5-wave longitudinal study into new students' identification with their flat—an interpersonal network group—and their halls of residence—an abstract social category.

Identity Motives and Social Identification

Social identity theorists have proposed a variety of motivations that may be involved in identification with groups. For example, a key premise of Tajfel and Turner's (1979) social identity theory is that groups strive for a sense of positive distinctiveness, which researchers have understood subsequently to reflect motives for self-esteem and distinctiveness (Abrams & Hogg, 1988; Spears, 2011). Brewer's (1991) optimal distinctiveness theory suggests that people identify with groups to satisfy basic motivations for inclusion and distinctiveness, whereas Hogg's (2000) uncertainty-identity theory proposes that the need for subjective meaning motivates identification with groups. Other theorists have suggested that people are motivated to construct identities that provide continuity between their past, present, and future, (Chandler, Lalonde, Sokol, & Hallett, 2003; Sani et al., 2007) and that give them feelings of efficacy or mastery over their environment (Breakwell, 1993).

Motivated identity construction theory. Motivated identity construction theory (MICT, Vignoles, 2011) takes a holistic approach to identity processes by incorporating this diverse range of motives into a unified theory. MICT proposes that, beyond basic needs such as water, food, and security, people have other, more psychological needs called *identity motives*. Identity motives differ from basic human needs in that they are psychological motivations that predispose people towards *seeing themselves* in certain ways. According to MICT, those aspects of one's identity that best satisfy these identity motives are seen as more central to self-definition, arouse more positive affect, and are behaviourally enacted more often, compared to those aspects of one's identity that frustrate the same motives (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006).

Vignoles and colleagues (2006) have shown that people are motivated to construct identities that give them a sense that their life is meaningful (the meaning motive); that distinguish them from others (the distinctiveness motive); that connect their past, present and future identities across time (the continuity motive); that allow

them to see themselves in a positive way (the self-esteem motive); that give them a sense of inclusion or acceptance by important others (the belonging motive); and that make them feel competent and capable of influencing their environment (the efficacy motive).[1.1] These motives have been found to influence identity construction at individual, relational, and group levels of self-representation (Vignoles et al., 2006) and across a range of cultures (Easterbrook et al., 2012; Vignoles et al., 2011).

However, an important finding is that these motives are differentially relevant to different identity processes. Following Reicher (2000), Vignoles (2011) distinguishes between processes of identity definition and identity enactment: *Identity definition* refers to the mainly cognitive processes of defining oneself as a symbolic object with particular characteristics and descriptive labels, whereas *identity enactment* refers to the processes of behaviourally acting out aspects of one's identity. Using a cross-lagged longitudinal design, Vignoles et al. (2006, Study 4) found that identity definition was directly influenced by the motives for meaning, distinctiveness, continuity, and self-esteem, with people placing the greatest importance within their self-definitions on aspects of their identity that best satisfied these motives. In contrast, identity enactment was directly influenced by the motives for self-esteem, belonging, and efficacy, and participants reported enacting more in their everyday behaviours those aspects of their identity that best satisfied these particular motives.

We propose that the theoretical framework of MICT and the concept of identity motives are particularly well suited for the study of social identification for several reasons. As noted above, MICT integrates predictions from several established theories of the motivations underlying social identification. Furthermore, identifying with a social group is essentially an identity process where group memberships become assimilated into one's self-concept (Amiot, de la Sablonnière, Terry & Smith, 2007; Tajfel & Turner, 1979) and hence influence people's behaviour (e.g. Postmes, Haslam, & Swaab, 2005). Thus, motives that have consistently been shown to influence identity construction processes seem particularly appropriate concepts for the study of identification. Moreover, the six identity motives have been shown to influence identity processes at the group level of self-representation (Vignoles et al., 2006, Study 2), suggesting that people will identify most with group memberships that best satisfy the motives, whereas they will identify less, if at all, with group memberships that frustrate the same motives.

Although we do not claim that identity motives are the only important construct to study when predicting social identity change, there is a good theoretical and empirical basis for applying MICT to the study of social identification.

We aim to address several limitations of the extant research into MICT. Firstly, whereas identity motives have been shown to influence identity processes associated with existing identity elements (Vignoles et al., 2006) and possible desired and feared future identities (Vignoles, Manzi, Regalia, Jemmolo, & Scabini, 2008), no previous research has investigated the motives' applicability to the assimilation of *new* identities into one's self-concept. The assimilation of new social identities into one's self-concept is a particularly important area of study, as identification with new social groups can act as a buffer against the negative psychological consequences of life transitions (Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009). Secondly, previous studies have shown that the six motives predict within-person variation in the relative importance of multiple aspects of identity in both cross-sectional and time-lagged analyses (Vignoles et al., 2006), but no study has investigated their ability to predict the process of within-person change in identification with the same identity aspect across multiple time points, something which is seen as essential to the study of identity processes (see Amiot et al., 2007, 2010).

Research from other perspectives. Beyond MICT, a handful of studies have focused on which motives or needs social group memberships can satisfy, and the consequences for the group members. Bettencourt and Sheldon (2001) showed that groups can satisfy needs for competence and social connectedness, and that people who best satisfy these needs from their group memberships display greater subjective and psychosocial well-being. Similarly, Iyer and Jetten (2011) found that people can gain self-continuity from their social identities and that this may lead to positive psychological effects. Others have shown that group members with high collective self-esteem show greater psychological adjustment to a life transition (Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999). These studies suggest that group memberships can satisfy the motives for continuity, self-esteem, belonging, and efficacy and highlight the psychological benefits that can be gained from this. However, most research in this area focuses only upon one or two motives, and results may therefore be confounded by the influence of the other, unmeasured motives, which previous research has shown can be quite strongly related to each other (Vignoles et al., 2006, Table 2). Moreover, most studies focus on single group

memberships, preventing any conclusions about how the influence of the motives may differ in different social contexts (for an exception see Johnson et al., 2006, reviewed below). Most crucially, none of these studies addressed questions regarding the motivations underlying group identification.

Amiot and colleagues (2010) provide perhaps the most direct test of the influence of psychological needs on social identification. Using a time-lagged design, they investigated the within-person identity processes that occur over time by assessing if the satisfaction of needs for autonomy, competence, and relatedness predicted changes in participants' identification with both a university and an on-line gaming community. Need satisfaction positively predicted within-person change in social identification with both groups over a 3-4 month period. Although this research clearly shows that psychological need satisfaction is involved in social identification processes, Amiot and colleagues use a composite measure of need satisfaction, collapsing together satisfaction of the three hypothesised needs into a single score for each participant. This makes it impossible to establish which specific needs were involved in identification, or whether this differed between different groups. Furthermore, Amiot and colleagues first measured participants' identification with their university within the first 2 months of the new academic term, and identification with the on-line gaming community within the first 3 months of its opening. Research has shown that identification can change meaningfully over time scales between 2-3 months (Jetten, Iyer, Tsivrikos, & Young, 2008; Vignoles et al., 2006), hence, by the time participants completed the measures they may have already assimilated these social identities into their self-concepts: the initial stages of identification may have already passed. We sought to address these issues within the design of our study by measuring satisfaction of the six identity motives separately, along with identification levels, across multiple time points.

Different Motives Underlying Identification with Different Groups

We also sought to address another important issue upon which MICT has been silent previously. Although identity motives have been applied to identity processes operating at the group level of self-representation (Vignoles et al., 2006, Study 2), the conceptions, dynamics, and functions of groups can be diverse (Hamilton & Sherman, 1996; Lickel, Hamilton, Lewis, Sherman, & Uhles, 2000; Prentice et al., 1994). A distinction is often made in the psychological literature between interpersonal network groups (or common bond groups) and social

categories (or common identity groups), and it has been argued that different identity processes are involved in identification and attraction to these different groups (e.g. Deaux & Martin, 2003; Stets & Burke, 2000).

Social categories are mainly founded upon shared characteristics. These shared characteristics are the basis of perceiving people as similar or connected in some important respects, and thus as part of the same category, but different from members of other, related categories (Deaux & Martin, 2003; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). These types of groups are often both abstract and sparse, such as nationality or political affiliation, with most members rarely, if ever, coming into close contact. Theorists have argued that social categories offer people a meaningful cognitive self-definition, providing distinguishing characteristics, social norms, and a sense of self-esteem and historical continuity (Deaux & Martin, 2003; Stets & Burke, 2000). This implies that identifying with social categories may be based upon the extent to which the category membership satisfies the more symbolically-focused motives associated with identity definition processes; meaning, distinctiveness, continuity, and self-esteem (see Vignoles, 2011).

It has been suggested that these motives are involved in both the process of defining the self and identifying with social categories. Following from social identity theory (Tajfel & Turner, 1979), researchers have argued that strivings for self-esteem (Abrams & Hogg, 1988) and distinctiveness (Brewer, 1991) motivate people to identify with social categories, and research has demonstrated that people both seek out and identify with social categories that are both distinctive (Brewer & Pickett, 1999; Vignoles et al., 2006) and positively valued (e.g. see Bettencourt et al., 1999). Other theorists have argued that some sense of continuity across time is necessary for a coherent and meaningful identity (Chandler et al., 2003; Taylor, 1989; Wiggins, 2001), and research has suggested that collective continuity is important for groups (Sani et al., 2007). Consistent with the view people strive for a sense of subjective meaning in their self-definitions (Baumeister, 1991; Heine, Proulx, & Vohs, 2006; Proulx & Heine, 2007), research has shown that people gain subjective meaning and reduce self-uncertainty by identifying with social groups (Hogg, 2000; Hogg, Siegel, & Hohman, 2011). Thus, people seem to define who they are in part through their social category memberships, identifying most with those social categories that best satisfy the motives for meaning, distinctiveness, continuity, and self-esteem.

In contrast, other groups can be seen as interpersonal network groups, which are based mainly upon the social interactions among the group members, rather than upon a shared self-definition. Theorists argue that these groups provide their members with a context within which to *enact* their identities by performing social roles and interacting with other group members (Deaux & Martin, 2003; Stets & Burke, 2000; Stryker, 1980). Newly formed interpersonal network groups often lack a well-defined group identity, so that group members only come to see themselves as a group and share a common social identity through their behavioural interactions (Postmes, Spears, Lee & Novak, 2005). This suggests that identity enactment processes are primarily involved when people first identify with an interpersonal network group, and thus people's identification with network groups may be based upon the extent to which they satisfy the more behaviourally-focused motives for self-esteem, belonging, and efficacy (see Vignoles, 2011).

These motives do indeed seem to be involved in the identity enactment processes implicated in interpersonal network groups. Self-presentation research suggests that people strive to gain feelings of self-esteem through social interactions (Schlenker, 2003), and sociological research suggests that self-esteem is achieved through people's behavioural enactments of their roles within small, interpersonal groups (Burke & Stets, 1999; Stets & Burke, 2000). Self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000) suggests that the needs for relatedness and competence—similar concepts to belonging and efficacy—are satisfied through people's behaviour, with others arguing that both belonging (Baumeister & Leary, 1995; Bettencourt & Sheldon, 2001) and efficacy (Burke & Stets, 1999; De Vries, Dijkstra, & Kuhlman, 1988; Stets & Burke, 2000) can be satisfied through the performance of social roles within interpersonal networks. Furthermore, people commit more strongly to groups that provide them with greater feelings of interpersonal relatedness, a concept synonymous with belonging (Sheldon & Bettencourt, 2002). It seems, then, that identity enactment processes operate within interpersonal network groups, and it may be the case that people come to identify most with interpersonal networks within which they can best satisfy the motives associated with this process: self-esteem, belonging, and self-efficacy.

More direct evidence that different groups satisfy different psychological needs is provided through a series of four studies by Johnson and colleagues (2006). In the first two studies, participants rated social category memberships as satisfying

what Johnson and colleagues' called ‘identity needs’; a composite of the motives for distinctiveness and meaning described above. In contrast, memberships within intimacy groups and task groups—two forms of interpersonal network groups—were rated respectively as satisfying needs similar to belonging (acceptance, comfort, belonging, and support needs) and efficacy (achievement, success, accomplish goals, and mastery needs). Two further studies found that participants made these links implicitly, and that priming the different needs led participants to freely list a greater proportion of the associated group type. Johnson and colleagues clearly demonstrate that people associate different types of needs with different types of groups, but did not measure the motives for self-esteem or continuity, preventing conclusions about the roles these motives play in different types of groups. Furthermore, in all but the first study, they did not distinguish between the needs for distinctiveness and subjective meaning, ignoring the possibility that these needs may be implicitly related to different types of groups, or that priming these two needs may lead to different effects. Crucially, participants’ identification with the various groups was not measured, preventing any conclusion about the relationship between identification and psychological need satisfaction.

We sought to address the limitations of this research and to test our theoretical perspective within our study design. We measured participants’ identification with a social category and an interpersonal network group together with the satisfaction of each of the six identity motives associated with each group, allowing us to draw specific conclusions regarding which motives are involved in identification with which type of group. We predicted that within-person changes in identification with a social category will be based especially upon concurrent changes in how much the category membership satisfies the motives associated with identity definition—meaning, self-esteem, continuity, and distinctiveness. In contrast, within-person changes in identification with an interpersonal network group will be based especially upon concurrent changes in how much the behavioural interactions between the group members satisfy the motives associated with identity enactment—self-esteem, belonging, and efficacy (see Figure 1.1).

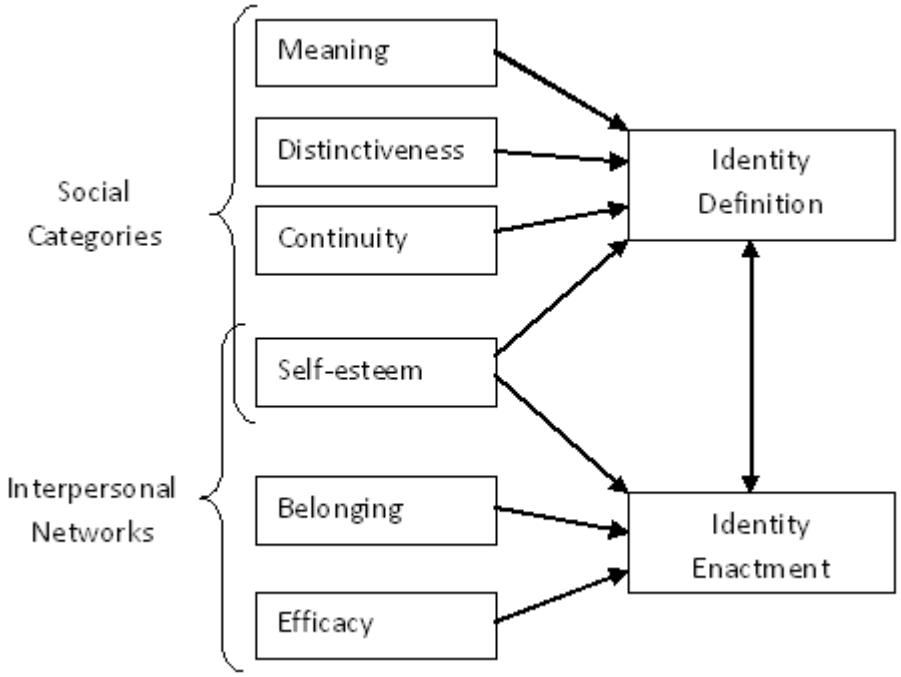


Figure 1.1: The hypothesised identity processes and identity motives involved when people identify with different types of groups.

The Current Study

Previous research has shown that the transition that students go through at the beginning of their university studies is an excellent opportunity to investigate identity processes (e.g. Jetten et al., 2008; Ruble & Seidman, 1996). To test our theoretical perspective, we chose to study aspects of students' university life that represented interpersonal network groups—students' groups of flatmates—and social categories—students' halls of residence.

We conducted our research at a campus university in the south of England with guaranteed accommodation on campus for first-year undergraduates and postgraduates numbering just under 3,500. There are several different halls of residence, ranging in structure, location, quality, and cost, and each has developed its own reputation and atmosphere over the years; some being renowned as lively and friendly, others as quiet and reserved. All residences are large, and, especially at the beginning of a new academic year, it is highly unlikely that all residents will know each other. Nonetheless, different residences have clearly defined shared identities derived from their historical reputation, and thus can be seen as abstract social categories within the university context.

The flat within which the students live is also likely to influence their experiences, with many students sharing accommodation with peers for the first time.

For some, their flatmates will become their primary friendship group; for others, flatmates may be of little importance. However, the flats do not have any pre-existing reputations or shared identities, and thus the flat that a student lives in can be seen as a novel interpersonal network group whose identity will be based upon the members' behavioural interactions.[1.2]

The data collection period covered the whole of the 10-week-long first term of the new academic year, keeping the study period within a meaningful length of time within the study's context and avoiding any influence of the students returning to their pre-university accommodation during the Christmas break. The first time wave of data collection was completed within the first two weeks of term; much earlier than previous research in this area (e.g. Amiot et al., 2007), allowing us to investigate the initial stages of social identification and the influence of the motives on identification with *novel* groups. Identity processes have been shown to operate over the time frame of the study (Amiot et al., 2010; Jetten et al., 2008; Vignoles et al., 2006), and our use of five discrete time points over this period enables us to investigate the process of within-person change in social identification across time. This is a major advantage that allows us to go beyond previous cross-sectional (e.g. Johnson et al., 2006) and cross-lagged (e.g. Amiot et al., 2010; Vignoles, et al., 2006) designs to directly test our theoretical perspective that changes in the satisfaction of identity motives associated with particular group memberships will predict concurrent changes in identification with those groups. The longitudinal design allows us to investigate this as a process occurring both within people and across multiple time points.

One interesting feature of this research design is the relationship between the two identities; the flats are nested within the residences. Self-categorisation theory (Turner et al., 1987) proposes that all but the most inclusive and exclusive social identities have sub- and super-ordinate social identities, and previous research has shown that these identities can influence each other in meaningful ways (Cinnirella, 1997; Hornsey & Hogg, 2000; Jetten, O'Brien, & Trindall, 2002). In the current research context, it seems likely that students' experiences of living in a particular residence would be substantially coloured by their experiences of living in a particular flat within that residence—and *vice versa*. Rather than studying these social identities as isolated entities, we decided to take account of the nested relationships between them, controlling statistically for the relationship between the

two identities in our analysis. This allows us to gain a clearer insight into the separate processes that are involved when people identify with these two different groups.

Based on our theoretical perspective, we expected that changes in students' identification with their halls of residence would be predicted especially by changes in how much their membership within the residences satisfied the motives associated with identity definition: Meaning (H1), self-esteem (H2), continuity (H3), and distinctiveness (H4). In contrast, we expected that changes in students' identification with their flat would be predicted especially by changes in how much their flat membership satisfied the motives associated with identity enactment: Self-esteem (H5), belonging (H6), and efficacy (H7).

Method

Procedure

Shortly before the start of a new academic year and during the first week of the residents' stay at university accommodation, the University's residential services department sent an email to every resident of University accommodation inviting them to take part in a longitudinal research project conducted jointly with the University's psychology department. The email stated that those who completed all five time-points would be entered into a draw for one prize of £100 and four prizes of £50, and provided a link to the first questionnaire. The initial questionnaire was on-line for the first two weeks of the new term. A link to a new questionnaire was emailed to respondents at the beginning of weeks four, six, eight, and ten, with each being on-line for one week. To reduce attrition, we created a second draw with two prizes of £25 for participants who missed one or more of the intermediary time points (times 2-4) of the questionnaire.

Participants

Five hundred and thirty three residents completed the Time 1 questionnaire. However, we included in the analysis only those who completed two or more time-points. Two hundred and seventy eight respondents (85 males, 192 females, 1 respondent did not report their gender, mean age = 20.8 years, SD = 4.29) from 202 flats completed two or more of the five time-points, with 135 completing all five waves.

To check for selective attrition, we first conducted a MANOVA comparing the sample of those who only completed the Time 1 questionnaire (N=255) against the sample of those who completed 2 or more questionnaires (N=278) on all of the Time 1 variables and the appropriate demographic variables. The MANOVA revealed no systematic multivariate differences between the samples at Time 1, $F(17, 375) = 1.38$, $p = .14$, $\eta^2 = .05$. However, analysis at the univariate level showed that those who dropped out were slightly older ($M = 21.62$, $SD = 5.90$) than those who stayed in ($M = 20.66$, $SD = 4.46$), $F(1, 391) = 5.76$, $p = .02$, $\eta^2 = .02$, were more likely to be male (54% attrition) than female (44% attrition), $\chi^2(1) = 25.56$, $p < .001$, and had lived in the UK for less time ($M = 10.60$ years vs. 13.69 years), $F(1, 391) = 708.03$, $p = .002$, $\eta^2 = .02$. Nevertheless, we found no significant differences between those who dropped out and those who remained in the study on any of the measures of identity motive satisfaction or identification ratings for either flat or residence identities. We conducted three further MANOVAs to investigate if there were any systematic multivariate differences between those who dropped out of the study after Time 2, Time 3, and Time 4 compared those who stayed in the study. The results showed no systematic differences between the samples compared, $ps > .05$, $\eta^2 s < .06$.

We also tested whether the pattern of covariances among the Time 1 identity motive and identification ratings differed between the two samples. Using AMOS 18, we conducted multigroup analyses to compare the fit of a model that freely estimated the covariances for the two samples against one that constrained these covariances to be equal across the samples. Cheung and Rensvold (2002) suggest that a change in comparative fit index [CFI] of less than 0.01 from the unconstrained model to the constrained model indicates equivalence. The model comparison revealed that the covariances among the ratings were equivalent between the two samples, $\Delta CFI = .004$, further suggesting that there were no meaningful differences between those who dropped out of the study and those who stayed in.

Questionnaire

We created on-line questionnaires using Macromedia Dreamweaver MX software (Macromedia, Inc., US). Measures were identical across the five time-points.

First, respondents indicated which residential block they lived in (*residence*) and the flat or floor number that contained their individual bedroom (*flat*).

These answers were automatically inserted into the wording of subsequent items asking participants to rate these identities on a six-item measure of identification using an 11-point scale (see Table 1 for items and scale anchors). The six items, adapted in part from previous work by Vignoles et al. (2006), covered various facets of identification: satisfaction with, and cognitive centrality of, the group membership, feelings of solidarity, and behavioural involvement with the group identity (see Ashmore, Deaux, & McLaughlin-Volpe, 2004; Leach et al., 2008), and showed excellent reliabilities for residence (T1-T5: α = .78-.87) and flat (T1-T5: α = .84-.89) identities.

Respondents then completed a series of 12 items using the same 11-point scale that measures feelings of meaning, self-esteem, continuity, distinctiveness, belonging, and efficacy associated with each of the two identities (adapted from Vignoles et al., 2006).[1.3] Questions and scale anchors are included in Table 1.1.

Finally, participants provided some personal details and were thanked for their participation. After the final wave, we emailed participants with a debriefing sheet thanking them again and providing contact details in case they wanted any further information.

Table 1.1: List of constructs and questions in the questionnaire. Continued…

Construct	Question
Identification Items	
1	How loyal do you feel towards 'X'?
2	How often do you show or tell people you are a resident of 'X' in your every day actions?[a]
3	How central or marginal is being a resident of 'X' to your sense of who you are?[b]
4	How happy or unhappy do you feel about being a resident of 'X'?[c]
5	How often do you think about the fact that you a resident of 'X'?[d]
6	How much do you like people to know you are a resident of 'X'?
Motive Items	
Meaning	How much does being a resident of 'X' give you a sense that your life is meaningful?
Belonging	How much does being a resident of 'X' give you a sense that you "belong" - that you are included among or accepted by people that matter to you?
Self-esteem	How much does being a resident of 'X' make you see yourself positively?
Continuity	How much does being a resident of 'X' make you feel that your past, present and future are connected?
Distinctiveness	How much do you feel that being a resident of 'X' distinguishes you - in any sense - from other people?
Efficacy	How much does being a resident of 'X' make you feel competent and capable?

Table 1.1: ...continued...

Note. Items shown are for residence identities only. For flat identity items, the words "resident of" in these items was replaced with "member of flat (or floor)". All questions are rated on an 11-point scale ranging from 0-10. Except where stated, scale anchors were 0 = Not at all, 5 = moderately, 10 = extremely

[a] Scale anchors were 0 = *Never*, 5 = *sometimes*, 10 = *extremely often.*

[b] Scale anchors were 0 = *Extremely marginal*, 5 = *intermediate*, 10 = *extremely central*

[c] Scale anchors were 0 = *Extremely unhappy*, 5 = *neutral*, 10 = *extremely happy*

[d] Scale anchors were 0 = *Never*, 5 = *sometimes*, 10 = *extremely often*

Analytic Strategy

We analysed our longitudinal data by constructing multilevel models for change (Singer & Willett, 2003). This approach treats repeated measures data as multilevel, with time points (Level 1) nested within people (Level 2), and allows participants who completed less than five time-points to be included within the analyses.[1.4] Autoregressive multivariate multilevel regression analyses (Singer & Willett, 2003) were conducted separately for residence and flat identities using HLM version 6.08 to conduct full maximum likelihood estimation (Raudenbush, Bryk, & Congdon, 2004).

As a baseline for analyses, we first computed an *unconditional growth model* (Model 1). This model included 'time' (coded 0-4 for Times 1-5, respectively) as the only substantive predictor. The parameter estimate for Time models the degree and direction of linear change in identification within people, over time. We allowed the effect of Time to be random, so that the change in identification across time could vary between people. A significant variance component for Time ($\tau(time)$) indicates significant between-person variation in the degree and/or direction of linear change in identification.[1.5]

This model partitions variance in the outcome variable into several meaningful components that can be compared with subsequent models: $\tau(time)$ represents the between-person variation in the linear trajectory of the outcome across the five time points, interpretable as representing the meaningful linear change in identification over the 10-week time scale of the study. σ^2 represents the variation in the outcome between the time points, after controlling for linear change over time, and thus can be interpreted as representing non-systematic, short-term, within-person fluctuations in identification. $\tau(\pi)$ represents between-person variation in identification at Time 1.

To assess how much variance in the outcome is accounted for by the predictors in subsequent models, we calculated the proportional reduction in these residual error (proportional reduction in error: PRE) terms for a model containing the predictors compared to a nested model without the additional predictors (Singer & Willett, 2003). Thus, PRE statistics can be interpreted in a similar way to the partial R^2 statistic in ordinary least squares regression.

Next, we added the identity motive ratings into the model (Model 2). Our primary aim was to investigate if within-person changes in the motive satisfaction

ratings predicted concurrent changes in identification. To investigate this directly, we expressed the within-person motive satisfaction ratings as *deviations* from the initial time 1 ratings and entered these as within-person predictors at Level 1. Significant parameter estimates for these predictors would indicate that within-person changes from the initial Time 1 motive satisfaction rating significantly predicted concurrent changes in identification, over time.

Since this rescaling removes between-person differences from the model (Duckworth, Tsukayama, & May, 2010; Paccagnella, 2006), we also included the initial Time 1 motive ratings in the model as between-person (Level 2) predictors. These parameters tested if initial levels of motive satisfaction predicted initial levels of identification, allowing us to investigate the amount of between-person variation in identification ($\tau(\pi)$) that the motives account for.

As discussed earlier, we expected that identification with one's residence would influence identification with one's flat, and vice versa. Model 2 ignores the relation between the two identities, which may confound the results. To control for this and better separate the effects on the two identities, we added either flat or residence identification—whichever was not the outcome of the analysis—into the model (Model 3). As with the identity motive ratings, we added Time 1 identification as a between- person predictor (Level 2), and changes from this Time 1 rating as a within-person predictor (Level 1). Thus, comparing Model 3 with Model 2 shows the impact of controlling statistically for the interdependence of the two identification measures, and ensures that motivational effects on the two identities are separated in the analyses.

Results

Descriptive statistics for the items are shown in Table 1.2, and both within-person and between-person inter-item correlations are shown in Table 1.3.[1.6]

Table 1.2. Means and standard deviations for identity motives and identification scales at each time point.

	Time 1		Time 2		Time 3		Time 4		Time 5	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Residence identity data set										
Meaning	3.44	2.83	3.50	2.65	3.42	2.64	3.56	2.61	3.58	2.70
Self-esteem	5.08	2.74	4.68	2.57	4.50	2.66	4.57	2.70	4.32	2.71
Continuity	3.29	2.92	3.18	2.75	2.95	2.84	3.30	2.79	3.35	2.94
Distinctiveness	4.29	2.89	4.25	2.61	4.40	2.65	4.51	2.58	4.22	2.66
Belonging	5.11	2.83	4.77	2.62	4.41	2.72	4.38	2.66	4.28	2.72
Efficacy	4.96	2.82	4.55	2.77	4.47	2.72	4.64	2.71	4.54	2.77
Residence identification	5.79	1.63	5.78	1.65	5.50	1.65	5.41	1.74	5.35	1.87
Flat identification	5.52	1.93	5.76	1.93	5.50	1.93	5.41	1.90	5.41	2.04
Flat identity data set										
Meaning	3.63	2.95	3.83	2.83	3.74	2.77	3.89	2.95	3.80	2.97
Self-esteem	4.65	2.89	4.80	3.01	4.58	2.91	4.71	3.09	4.37	3.08
Continuity	3.36	2.96	3.33	2.84	3.19	2.89	3.38	3.09	3.44	3.09
Distinctiveness	3.85	2.91	4.13	2.80	4.27	2.86	4.20	2.98	4.41	2.96
Belonging	4.82	3.00	4.96	3.02	4.81	2.95	4.90	3.15	4.74	2.99
Efficacy	4.60	3.00	4.73	2.91	4.63	2.99	4.83	3.12	4.56	3.13
Residence identification	5.78	1.62	5.77	1.65	5.52	1.64	5.38	1.76	5.31	1.86
Flat identification	5.53	1.92	5.77	1.92	5.53	1.90	5.38	1.92	5.41	2.01

Table 1.3. Inter-item correlations and the appropriate means and standard deviations. Within-person correlations (based on participant-centred items) are shown above the diagonal. Between-person correlations (based on averaged scores across time points) are shown below the diagonal.

		Ratings for residence identity							Ratings for flat identity							
		1	2	3	4	5	6	7	1	2	3	4	5	6	7	SD
Ratings for residence identity																
1	Meaning	-	.45	.39	.30	.50	.33	.37	.48	.33	.26	.28	.31	.34	.33	1.34
2	Self-esteem	.80	-	.38	.34	.64	.50	.47	.31	.44	.27	.24	.37	.39	.40	1.32
3	Continuity	.79	.70	-	.33	.30	.37	.28	.29	.25	.57	.29	.18	.28	.26	1.30
4	Distinctiveness	.62	.65	.58	-	.31	.47	.31	.28	.26	.28	.34	.25	.31	.29	1.41
5	Belonging	.76	.89	.65	.59	-	.44	.46	.29	.36	.20	.19	.45	.31	.43	1.38
6	Efficacy	.73	.84	.64	.70	.77	-	.32	.31	.35	.30	.26	.26	.46	.26	1.31
7	Identification	.68	.80	.55	.61	.77	.73	-	.25	.28	.25	.16	.29	.26	.67	0.76
Ratings for flat identity																
1	Meaning	.84	.79	.74	.60	.76	.72	.67	-	.60	.45	.43	.58	.49	.37	1.35
2	Self-esteem	.70	.82	.63	.56	.78	.75	.68	.87	-	.48	.43	.68	.65	.42	1.44
3	Continuity	.77	.68	.91	.58	.63	.63	.54	.84	.73	-	.43	.44	.51	.36	1.36
4	Distinctiveness	.70	.68	.64	.75	.67	.70	.62	.80	.73	.74	-	.39	.52	.30	1.47
5	Belonging	.60	.73	.55	.49	.80	.66	.62	.82	.90	.66	.69	-	.56	.46	1.39
6	Efficacy	.67	.77	.62	.59	.74	.84	.67	.81	.89	.72	.78	.84	-	.41	1.37
7	Identification	.57	.70	.52	.47	.74	.63	.77	.76	.82	.62	.68	.83	.78	-	0.84
	Mean	3.58	4.80	3.31	4.32	4.75	4.73	5.65	3.85	4.71	3.40	4.19	4.89	4.71	5.57	
	SD	2.33	2.30	2.55	2.30	2.37	2.44	1.52	2.54	2.57	2.64	2.49	2.64	2.68	1.75	

Residence Identities

Table 1.4 shows the analyses for residence identities. In Model 1, the parameter estimate for Time, $B = -0.08$ $p < .001$, indicates that, on average, respondents' Residence Identification decreased significantly over time. However, the variance component for Time, $\tau(time) = 0.06$, $p < .001$, indicates the presence of significant individual differences in the strength and direction of linear change in Residence Identification over time. Thus, we can try to account for some of this variation by adding predictors to the model and calculating the PRE for $\tau(time)$.

Supporting our hypotheses, Model 2 showed that within-person changes in the satisfaction of motives for Meaning (H1), Self-Esteem (H2), and Distinctiveness (H4) positively predicted concurrent changes in Residence Identification. We also found significant effects for changes in Belonging. However, contrary to H3, changes in Continuity did not predict concurrent changes in Residence Identification. In Model 3, the highly significant parameter estimate for Flat Identification, $B = 0.49$, $p = <.001$, confirms that changes in identification with one's residence and one's flat are closely related. Crucially, H1, H2, and H4 were still supported when controlling for Flat Identification, whereas the unpredicted effect of Belonging was no longer significant.

Although our hypotheses were focused on predicting change, we also looked at the cross-sectional effects of initial motive satisfaction. These appear in the 'between-person' (Level 2) part of our models. These results showed a consistent pattern with the preceding findings. In Models 2 and 3, initial levels of Meaning, Self-Esteem, and Distinctiveness positively predicted initial levels of Residences Identification, whereas initial levels of Continuity did not.[1.7] The unpredicted effect of Belonging was significant in Model 2 only, whereas feelings of Efficacy predicted initial Residence Identification in both models.

Table 1.4. Autoregressive multivariate multilevel regression analyses predicting respondents' identification with the residences across time points (Level 1: N = 1,007) nested within participants (level 2: N = 278). Continued…

	Model 1			Model 2			Model 3		
Parameter	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Fixed parameters									
Within-person ratings (level 1)									
Intercept	2.12	0.15	<.001	3.30	0.13	<.001	2.12	0.15	<.001
Time	-0.08	0.02	<.001	-0.07	0.02	.001	-0.08	0.02	<.001
Meaning				0.07	0.02	.002	0.05	0.02	.003
Self-esteem				0.11	0.02	<.001	0.07	0.02	.001
Continuity				0.03	0.02	.119	0.01	0.02	.363
Distinctiveness				0.06	0.02	.001	0.04	0.01	.015
Belonging				0.12	0.02	<.001	0.03	0.02	.075
Efficacy				0.02	0.02	.306	0.01	0.02	.577
Flat identification							0.49	0.02	<.001
Between-person ratings (level 2)									
T1 Meaning				0.06	0.03	.048	0.07	0.03	.013
T1 Self-esteem				0.21	0.04	<.001	0.15	0.04	<.001
T1 Continuity				-0.04	0.03	.187	-0.05	0.02	.039
T1 Distinctiveness				0.08	0.03	.003	0.07	0.02	.002
T1 Belonging				0.12	0.04	.001	0.01	0.03	.706
T1 Efficacy				0.09	0.03	.010	0.07	0.03	.023
T1 Flat identification							0.39	0.03	<.001

Table 1.4: …continued.

	Model 1		Model 2		Model 3	
Residual Variance	*B*	*SE*	*B*	*SE*	*B*	*SE*
Autoregressive ρ	0.30	0.10	0.14	0.09	0.06	0.08
Within-person σ^2	0.75	0.12	0.54	0.06	0.32	0.03
Between-person *τ(π)*	1.82	0.25	0.55	0.11	0.56	0.08
Time τ(time)	0.06	0.02	0.02	0.01	0.02	0.01
Cov *τ(π)* * τ(time)	0.00	0.05	0.00	0.03	-0.04	0.01
Deviance	3149.08		2670.13		2292.07	
Estimated Parameters	7		19		21	

PREs calculated from the variance components between Models 1 and 2 show that the six identity motives accounted for 66.1% of the between-person variation in the degree and the direction of linear change in Residence Identification over time ($\tau(time)$), and 69.6% of the between-person variation in initial levels of Residence Identification ($\tau(\pi)$). The motives also accounted for 28.2% of the non-systematic, within-person variation in Residence Identification (σ^2). Comparing the variance components between Models 2 and 3, Flat Identification accounted for no additional between-person variation in the degree and direction of linear change in Residence Identification over time ($\tau(time)$), nor in initial between-person levels of Residence Identification ($\tau(\pi)$). However, Flat Identification accounted for 39.7% of the remaining non-systematic, within-person variation in Residence Identification (σ^2).

Flat Identities

Table 1.5 shows the analyses for flat identities. In Model 1, the non-significant parameter estimate for Time, B = -0.02 p = .527, indicates that respondents' Flat Identification showed no significant *average* increase or decrease over time. However, the significant variance component for Time, $\tau(time)$ = 0.11, p < .001, indicates that respondents' Flat Identification did change over time, and that there was significant between-person variation in the strength and direction of this change.

Supporting our hypotheses, within-person changes from the initial motive satisfaction ratings for Self-Esteem (H5), Belonging (H6), and Efficacy (H7), as well as Continuity positively predicted concurrent changes in Flat Identification in Model 2, whereas changes in the ratings for Meaning and Distinctiveness did not. The highly significant parameter estimate for Residence Identification in the Model 3, B = 0.62, p = <.001, confirms that identification with one's residence and one's flat are closely related. Once Residence Identification was controlled for, the predicted effects of Self-Esteem, Belonging, and Efficacy remained significant, supporting hypotheses H5, H6, and H7, whereas the unpredicted effect of Continuity was no longer significant.

Although not our main focus, we again looked at the between-person (Level 2) effects of initial levels of motive satisfaction. These showed a largely consistent pattern with the preceding findings. In Models 2 and 3, initial levels of Belonging

and Efficacy positively predicted initial levels of Flat Identification, whereas initial levels of Meaning, Continuity, and Distinctiveness did not. The initial level of Self-Esteem was a marginal predictor of initial Flat Identification in Model 2, but not in Model 3.

PREs calculated from the variance components between Models 1 and 2 show that the six identity motives accounted for 58.7% of the between-person variation in the degree and the direction of linear change in Flat Identification over time ($\tau(time)$), and 66.9% of the between-person variation in initial levels of Flat Identification ($\tau(\pi)$). The motives also accounted for 18.6% of the non-systematic, within-person variation in Flat Identification (σ^2). PREs calculated from the variance components between Models 2 and 3 indicate that Residence Identification accounted for 25.5% of the remaining between-person variation in the degree and the direction of linear change in Flat Identification over time ($\tau(time)$) and 23.5% of the remaining between-person variation in initial levels of Flat Identification ($\tau(\pi)$). However, residence identification accounted for 41.3% of the remaining non-systematic, within-person variation in flat identification (σ^2).

Summary of the main findings. Within-person changes in the satisfaction of the motives for meaning (H1), self-esteem (H2), and distinctiveness (H4) associated with participants' *halls of residence* predicted concurrent changes in participants' identification with their *halls of residence*, whereas changes in the satisfaction of continuity (H3), belonging, and efficacy did not. In contrast, within-person changes in the satisfaction of the motives for self-esteem (H5), belonging (H6), and efficacy (H7) associated with participants' *flats* predicted concurrent changes in participants' identification with their *flat*, whereas changes in the satisfaction of meaning, continuity, or distinctiveness did not.

Table 1.5: . Autoregressive multivariate multilevel regression analyses predicting respondents' identification with the flats across time points (Level 1: N = 1,013) nested within participants (level 2: N = 278). Continued…

	Model 1			Model 2			Model 3		
Parameter	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Fixed parameters									
Within-person ratings (level 1)									
Intercept	5.63	0.11	<.001	3.08	0.13	<.001	0.91	0.20	<.001
Time	-0.02	0.03	.527	-0.04	0.02	.054	0.03	0.02	.091
Meaning				0.04	0.03	.085	0.00	0.02	.808
Self-esteem				0.06	0.03	.033	0.04	0.02	.043
Continuity				0.05	0.02	.018	0.01	0.02	.428
Distinctiveness				0.03	0.02	.126	0.02	0.02	.130
Belonging				0.15	0.03	<.001	0.11	0.02	<.001
Efficacy				0.08	0.03	.003	0.05	0.02	.027
Residence identification							0.62	0.03	<.001
Between-person ratings (level 2)									
T1 Meaning				0.03	0.04	.552	-0.03	0.04	.450
T1 Self-esteem				0.08	0.05	.094	-0.01	0.04	.853
T1 Continuity				0.03	0.03	.441	0.02	0.03	.417
T1 Distinctiveness				0.04	0.03	.267	0.01	0.03	.791
T1 Belonging				0.24	0.04	<.001	0.26	0.04	<.001
T1 Efficacy				0.14	0.04	<.001	0.08	0.03	.011
T1 Residence identification							0.54	0.04	<.001

Table 1.5: …continued.

	Model 1			Model 2			Model 3		
Residual Variance	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Autoregressive ρ	0.12	0.09		0.01	0.08		-0.02	0.08	
Within-person σ^2	0.74	0.08		0.61	0.06		0.36	0.03	
Between-person *τ(π)*	2.83	0.31		0.94	0.13		0.72	0.09	
Time									
τ(time)	0.11	0.02		0.04	0.01		0.03	0.01	
Cov *τ(π)* * τ(time)	-0.10	0.06		-0.10	0.03		-0.08	0.02	
Deviance	3404.57			2916.3			2461.9		
Estimated Parameters	7			19			21		

Discussion

Supporting our predictions, changes over time in satisfaction of the motives thought to be most implicated in the process of identity definition—meaning (H1), self-esteem (H2), and distinctiveness (H4)—predicted concurrent changes in respondents' identification with their residence, a novel social category. In contrast, but in line with our predictions, changes in the satisfaction of the motives thought to be most implicated in the process of identity enactment—self-esteem (H5), belonging (H6), and efficacy (H7)—predicted concurrent changes in respondents' identification with their flat, a novel interpersonal network group. These effects represent processes, occurring within-individuals across multiple time points, and were found whilst controlling for individual differences in initial motive satisfaction ratings, the nested nature of the identities studied, and the main effects of time.

Unexpectedly, changes in the satisfaction of the continuity motive did not predict concurrent changes in identification with the respondents' halls of residence. This may reflect the novelty of the groups involved, since students had no prior experience with the halls of residence from which feelings of continuity might have been derived. Perhaps the continuity motive only comes into play in social identification once a category membership has become an established part of one's identity, but not in the initial stages.

Although our main focus here was on within-person change processes, cross-sectional relationships between individual differences in initial motive satisfaction and initial identification were also consistent with our hypotheses. Initial satisfaction of the motives for meaning, self-esteem, distinctiveness, and efficacy positively predicted initial levels of residence identification, whereas initial satisfaction of belonging and efficacy motives predicted initial flat identification. The similarity of the results at both levels of analysis provides further support for our theoretical perspective.

Our findings extend previous work into motivated identity construction and social identification in several ways. This is the first demonstration that the identity motives proposed by MICT influence identity processes surrounding the assimilation of novel group memberships into the current self-concept. Previous research has found that successfully assimilating new group memberships into one's self-concept can act as a buffer against the negative psychological effects associated with life transitions (Iyer et al., 2009), and our results clearly suggest that such assimilation

depends upon the extent to which the new group memberships satisfy the identity motives applicable to that type of group. To our knowledge this is also the first study of the motivations underlying social identification that has applied a five-wave longitudinal design. This allowed us to go beyond previous cross-sectional and cross-lagged studies to investigate the processes involved in within-person changes in social identification, something which has been recognised as an important area for study (Amiot et al., 2010, 2007). Notably, our finding that changes in the satisfaction of identity motives accounted for around 60% of the between-person variance in identification with both groups suggests that the concept of identity motives is an important one for the field of social identification.

Our results also build upon work into the motivations involved in changes in identification with different types of group memberships. Johnson and colleagues (2006) previously showed that people perceive that different group memberships satisfy different motivations, whereas Amiot and colleagues (2010) showed that people's psychological need satisfaction associated with a group membership predicted their identification with that group. Our findings bridge the gap between these two lines of research, showing which specific identity motives are most directly involved in social identification with different types of groups.

A strength of our research is its simultaneous focus on multiple identity motives and multiple group memberships. Here, by systematically focusing on the effects of six motives on two meaningfully different social group memberships, we can avoid all-or-nothing conclusions about the influence of the motives that may arise when only single motives are studied, and enables us to draw more detailed conclusions about the influences of the specific motives. For example, our work extends previous research into self-esteem (e.g Bettencourt et al., 1999), confirming that this is indeed an important and pervasive motive relevant to identification with both interpersonal networks and social categories. In contrast, our results suggest that the distinctiveness motive may not be involved in identifying with novel interpersonal network groups (but see Jans et al., 2011). Notably, controlling for the relationship between the two identities helped us to isolate more clearly the differing patterns of direct motivational predictors of residence and flat identification: for both identities, a relatively diffuse pattern of predictors was found in Model 2, whereas the predicted effects remained significant and unpredicted ones became non-significant in Model 3. This highlights the need to investigate the satisfaction of the

various identity motives simultaneously within studies, but also the need to separate the effects of the motives, as different motives may be involved in different social contexts, something which previous research has sometimes neglected (e.g. Amiot et al., 2010).

Interestingly, the PRE statistics indicate that identity motives mainly account for meaningful long-term change in identification, whereas the covariance between the two nested identities mainly accounts for short-term, unsystematic fluctuations in identification. We can speculate that these short-term fluctuations that seem to affect both identities simultaneously may be attributable to additional variables not measured in the study. Perhaps they represent concurrent changes in the transient mood of the students, or changes in other prominent areas of the students' life at university, such as their academic studies.

Although previous researchers have independently argued that the six motives we studied are involved in identification processes (e.g. Breakwell, 1987; Brewer, 1991; Hogg, 2007), MICT is the only theoretical model that combines this range of motives into a unified theory and relates these various motives to the different identity processes involved when people identify with different groups. Nevertheless, these six motives are not necessarily an exhaustive list of the motivations underlying identity processes, nor of the constructs that can facilitate changes in social identification. For example, there is convincing evidence that humans are motivated by a need for autonomy (Deci & Ryan, 2000; Ryan & Deci, 2000) which has recently been applied to identity processes (Ryan & Deci, 2003; but see Vignoles, 2011; and note 1.1), and other research has shown that the levels of social support received within social groups can influence identification (Amiot et al., 2010). Future research should incorporate these as well as any other additional variables that may be involved in identity processes.

Future research should also address some possible limitations with the current study. Although we demonstrated the relationships between different motives and identification over time, the simultaneous measurement of motive satisfaction and identification at each time point prevents firm conclusions regarding causal directionality. Both theory and previous research suggest that identification is a consequence rather than a cause of motive satisfaction (Brewer, 1991; Hogg, 2007; Vignoles et al., 2006), but further confirmation of this causality would be beneficial. Future studies experimentally manipulating the satisfaction of the motives and

measuring resulting changes in identification would provide further empirical support for the causal influence of motives on identification. Future research could also investigate the motivations involved in identification with other types of groups. For example, several researchers have made a distinction between intimacy and task groups (Johnson et al., 2006; Lickel et al., 2000; Lickel, Hamilton, & Sherman, 2001; Sherman et al., 2002), and direct tests of the motivations involved when people identify with these different types of social network groups would further enhance our theoretical framework and deepen understanding of social identification processes within different groups.

Despite these limitations, however, our results suggest that the specific motivations involved when people identify with a social group depend upon the properties of the group in question, and on the historical and contextual foundation of the group. Our results suggest that people identify with newly formed interpersonal network groups if the behavioural interactions with the group members provide them with a sense of efficacy, belonging, and self-esteem, whereas new group members identify with established social categories if they associate the symbolic meaning of group membership with feelings of meaning, self-esteem, and distinctiveness. Our research is among the first to demonstrate that there are different motivations involved when people identify with different types of groups.

Acknowledgements

Thanks to Daniel Hyndman who aided in the construction of the on-line questionnaires, and to Lorinda Holness who encouraged and partly funded the study on behalf of the University of Sussex's residential services department. Thanks also to Dr. C. Knee, Dr. M. Koschate, Jesse Allpress, Prof. Rupert Brown, Laura Celeste, Fidelma Hanrahan, Ellinor Owe, and an anonymous reviewer for their useful comments on a previous version of this paper.

Notes

1.1. Readers familiar with Self-determination theory (SDT) may be surprised by the absence of an 'autonomy motive' in MICT. Whereas the SDT needs for relatedness and competence have been shown to have conceptually similar identity motives for belonging and efficacy, this does not mean that there is any reason to assume a perfect one-to-one correspondence between basic needs and identity motives (see Vignoles, 2011). Indeed, one of the most common definitions of the autonomy need is a need for one's behaviour to be in accordance with one' self-views (Deci & Ryan, 2000; Ryan & Deci, 2000). This definition suggests that autonomy may have some role to play in the congruence between identity definition and enactment but forecloses it from playing a role in the assimilation of new group memberships into one's identity: One's behaviour cannot closely match a self-view that does not exist yet. It also suggests that autonomy may not be involved in the specific content of one's identity but come into play once people have an established self-view.

1.2. Over 60% of students are allocated their first choice halls, and most are allocated one of their top three choices. The University's Residential Services Department places them in a flat within the residence. However, there are opportunities for residents to move. Thus, both groups might be characterized as ascribed, but not wholly impermeable.

1.3. To minimise the load on participants, single item measures were used to assess satisfaction of the six motives. The use of carefully worded single item measures is well established when participants are required to make repeated ratings on the same dimension (e.g. Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Vignoles et al., 2006).

1.4. This approach also allows us to account for higher-level clustering of people within flats, and flats within residences. We initially analysed four-level models using MLwiN version 2.22 (Rasbash, Browne, Healy, Cameron, & Charlton, 2010). However, these models consistently failed to converge. Variance components analyses showed negligible flat-level (0.18%) and residence-level (1.44%) variance in flat identification, and zero flat-level and residence-level variance in residence identification. Hence, for simplicity we report two-level analyses, with time-points (Level 1) nested within people (Level 2). Alternative

analyses using different Level 1 covariance structures showed substantively identical results to those reported here.

1.5. We also investigated the effects of Time2 and Time3 for both identities. Neither effect was significant for residence identities. When analysing flat identities, both Time2 and Time3 had significant parameter estimates, but including these in the model did not change the substantive pattern of estimates or significance levels. We therefore opted for the simpler model reported here.

1.6. Missing data at Level 1 were dealt with by listwise deletion, hence, analyses for the two different identities have slightly different sample sizes.

1.7. The small negative effect of the initial level of continuity in Model 3 may be a statistical artefact, as this effect was not found in Model 2, and it was not found in alternative analyses using different covariance structures.

PAPER 2: What does it mean to belong? Interpersonal bonds and intragroup similarities as predictors of felt belonging in different types of groups.

Matt Easterbrook and Vivian. L. Vignoles,
University of Sussex

Reference:

Easterbrook, M., & Vignoles, V. L. (2012). What does it mean to belong? Interpersonal bonds and intragroup similarities as predictors of felt belonging in different types of groups. *Manuscript submitted for publication.*

Abstract

The social identity perspective proposes that feelings of group belonging are gained from perceptions of intragroup similarity. However, this is founded upon a conceptualisation of groups as social *categories:* groups that are based upon perceptions of similarities between people who share certain characteristics. Many groups may be construed alternatively as interpersonal *networks:* groups based upon the relationships and interactions among members. In this case, feelings of belonging are likely to be gained from the interpersonal bonds among members. We tested these predictions by conducting multilevel structural equation modelling using longitudinal data from 113 participants. Results indicated that perceived intragroup similarity prospectively predicted feelings of belonging derived from social category memberships but not from network group memberships; in contrast, the quality of interpersonal bonds between members predicted feelings of belonging derived from memberships in both types of groups. This work highlights the importance of distinguishing between different types of groups.

Introduction

Human beings are a social species. It is no surprise, then, that group memberships are highly influential to human psychology. Research has shown that people display strong favouritism toward their groups (Billig & Tajfel, 1973), readily define themselves in terms of their groups memberships (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), and may base their prejudices (Brown, 2010) and friendships (Hogg, CooperShaw, & Holzworth, 1993) upon group memberships alone. One reason that groups are so important to human psychology is that they can provide their members with feelings of belonging (Gardner, Pickett, & Brewer, 2000), satisfying a basic need that is essential for optimal psychological functioning (Baumeister & Leary, 1995; Maslow, 1970; Ryan & Deci, 2000). However, despite the importance of feelings of belonging derived from groups, there remain stark differences in what theorists understand to be the *antecedents* to a sense of belonging.

In this article, we investigate how feelings of belonging are gained from group memberships, predicting that feelings of belonging are based on different antecedents depending upon the type of group involved. Using a longitudinal design, we conducted multilevel structural equation modelling to investigate our predictions that feelings of belonging associated with membership of *social categories* are

gained through the cognitive processes of self-categorisation: self-stereotyping and perceptions of category homogeneity. In contrast, feelings of belonging associated with membership of *network* groups are expected to be independent of self-categorisation processes, and gained through the interpersonal bonds between ingroup members.

Perhaps the most prominent theory within the social identity perspective that links group memberships to feelings of belonging is optimal distinctiveness theory (ODT, Brewer, 1991; Leonardelli, Pickett, & Brewer, 2010). According to ODT, identification with groups is motivated by strivings for belonging and distinctiveness. Feelings of belonging are gained from inclusion and immersion within large and inclusive groups, while feelings of distinctiveness are gained from intergroup comparisons, with smaller groups providing greater feelings of distinctiveness. Identification is predicted to be strongest for medium sized groups that are thought to provide the best opportunity to experience simultaneous feelings of intragroup belonging and intergroup distinctiveness.

ODT suggests that feelings of belonging are gained from a sense of immersion or inclusion within groups, achieved by means of the categorical perception processes outlined in self-categorisation theory (SCT, Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), whereby group members (including the self) are perceived, not as individuals, but as depersonalised and interchangeable exemplars of a homogeneous group. Supporting the idea that these cognitive processes are linked to group belonging, research has found that experimentally threatening participants' membership within groups can lead to strivings to reaffirm their membership through heightened perceptions of group homogeneity (Pickett, Bonner, & Coleman, 2002), self-stereotyping (Pickett & Brewer, 2001; Spears, Doosje, & Ellemers, 1997), and increased perceptions of in-group size (Pickett, Silver, & Brewer, 2002). Furthermore, research has shown that such categorical perception leads to depersonalised—as opposed to interpersonal—attraction, where more prototypical group members are liked more than less prototypical members (Hogg et al., 1993; Hogg & Hains, 1996). This suggests that prototypical group members may feel more belonging. These cognitive processes have also been directly linked to feelings of belonging, with evidence that people feel most included within larger and thus more depersonalised groups (Badea, Jetten, Czukor, & Askevis-Leherpeux, 2010), and that people with a strong need to belong have heightened perceptions of the amount of

national consensus on their opinions, which can also be increased through priming fears of rejection (Morrison & Matthes, 2011). Thus, the social identity perspective suggests the antecedents to feelings of belonging are cognitive perceptions of intragroup similarity: self-prototypicality and group homogeneity.

While there is evidence supporting the proposal that feelings of belonging can be gained from inclusion and immersion within groups, the social identity perspective conceptualises groups primarily as social *categories.* Categories are founded upon characteristics shared between people, which form the root of perceptions that the category members are similar and connected to each other (Turner et al., 1987). They are often perceived as abstract and sparse collectives, characterised by stereotypes, norms, perceptions of homogeneity, and a lack of behavioural interactions (Harb & Smith, 2008; Serpe & Stryker, 2011; Stets & Burke, 2000). The proposal that feelings of belonging are gained from being fully immersed within large and inclusive groups makes good sense to the extent that groups are construed in this way, but may lose its applicability to the extent that groups are construed differently.

Alternatively, groups may be conceptualized as social networks. *Network* groups are based upon the behavioural interactions between the members, and provide a context within which relationships can form and roles can be enacted (Deaux & Martin, 2003; Serpe & Stryker, 2011; Stets & Burke, 2000). These groups are construed as a set of relationships rather than a collective whole (Harb & Smith, 2008), and are argued to be based upon interdependence (Wilder & Simon, 1998), intimacy (Lickel et al., 2000), and interactions among the members (Deaux & Martin, 2003; Easterbrook & Vignoles, 2012a; Lickel et al., 2000). Furthermore, members of network groups often occupy specific roles (Serpe & Stryker, 2011; Stets & Burke, 2000), which individualise and distinguish the members from each other (Hornsey & Jetten, 2004; Jans, Postmes, & Van der Zee, 2011), inhibiting perceptions of intragroup similarity. Feelings of belonging derived from these groups are unlikely to be based upon categorical perceptions of homogeneity and typicality, but more upon the *relationships* among the individual group members.

Feelings of belonging derived from interpersonal relationships are usually understood to have very different antecedents to those emphasised in the social identity literature. Baumeister and Leary (1995) conducted a comprehensive review of evidence convincingly demonstrating that feelings of belonging are gained

through relationships characterised by both frequent contact and strong emotional bonds. Further evidence suggests that people gain greater satisfaction from their relationships when they are characterised by intimacy (Collins & Read, 1990; Hays, 1984) and interdependence (Whitton & Kuryluk, 2012), and when interactions are frequent (S. Kline & Stafford, 2004; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). This maps onto the above conceptualisation of network groups, suggesting that intimacy, interdependence, and frequent interactions may be the antecedents of feelings of belonging associated with both relationships and network group memberships.

We expect, therefore, that feelings of belonging associated with social category memberships are likely to arise from categorical perceptions of intragroup similarity—category homogeneity and self-stereotyping—in line with the social identity perspective. In contrast, feelings of belonging associated with memberships within network groups are likely to arise from the quality of the interpersonal bonds between the members, indicated by feelings of intimacy and interdependence, and frequent interactions between the members. We expect, therefore, that, while memberships within networks and categories will both give feelings of belonging (Gardner et al., 2000), perceptions of intragroup similarity will predict feelings of belonging associated with social category memberships (Hypothesis 1 [H1]). In contrast, we expect that intimate bonds and frequent interactions with the other members will predict feelings of belonging associated with network memberships (Hypothesis 2 [H2]).

We should clarify that we believe it is useful to distinguish between these two types of groups for analytical purposes, but we do not propose that there is a clear dichotomy between network groups and social categories. Instead, particular groups will be conceived as one type of group relatively more (or less) than the other due to factors such as the group's relative size and its dependence upon the interactions between its members. Groups that are characterised by a lack of interactions between the group members (Easterbrook & Vignoles, 2012a; Postmes, Spears, Lee, & Novak, 2005) and that are relatively large (Jans et al., 2011, Study 3) are more likely to be conceived as a collective whole (Harb & Smith, 2008), and therefore fit more closely to the conceptualisation of social categories. In contrast, groups that are relatively small and can be characterised by the behavioural interactions between the members are more likely to be conceived as social networks.

Furthermore, social identity and self-categorisation processes have been shown to occur within a range of groups, and we do not propose they are absent within interpersonal networks. Indeed, theorising in a similar way to our argument regarding belonging, Postmes and colleagues (Postmes, Spears, Lee & Novak, 2005) have shown that members of groups based upon shared social identities—similar to social categories—are influenced by the group through the social norms attached to the shared identity. In contrast, members of groups based upon the interactions between the members—similar to network groups—are influenced by the group through the behaviour of other members. Consequently, social influence is increased within groups based upon the members' interactions through heightening the members' individual distinctiveness, whereas, within groups based on a shared social identity, social influence is increased through depersonalising the group members, a typical self-categorisation process. Furthermore, within groups based upon the members' interactions , perceptions of entitativity and identification can be heightened by increasing the individual distinctiveness of the members (Jans et al., 2011), findings that are contrary to those usually found by social identity theorists when investigating social categories. Thus, the group processes proposed by SCT operate in groups similar to both network groups and social categories, but they are influenced by different factors. In a similar way to this, we expect members of both network groups and social categories to gain feelings of belonging from their group memberships, but these feelings of belonging will be associated with different antecedents.

Although this distinction between social categories and network groups is certainly not a new one (e.g. Deaux & Martin, 2003; Easterbrook & Vignoles, 2012a; Harb & Smith, 2008b; Lickel et al., 2000; Serpe & Stryker, 2011; Stets & Burke, 2000), very few studies have looked at the subjective *experience* of the members in these different types of groups, rather than the differences in how these groups can be characterised. Previous research has shown that there are differences between these group types in the links between member and group attachment (Prentice, Miller, & Lightdale, 1994), the influence of group norms (Sassenberg, 2002), the identity processes that they implicate (Easterbrook & Vignoles, 2012a; Ethier & Deaux, 1994), and in levels of perceived entitativity (Lickel et al., 2000). Here, however, we investigate within-person relationships between participants' feelings of belonging that they associate with their various group memberships, and a range of

their perceptions about these groups. This allows us to build on past research and draw conclusions about what it is that members of particular types of groups associate with the belonging they feel from their various group memberships.

Method

Design, Participants and Procedure

Because feelings of belonging could also be a cause of interpersonal bonds and perceptions of intragroup similarity as well as a consequence, we used a longitudinal design over a three-month period in order to focus our analyses on the intended causal direction. In exchange for course credit, 160 undergraduate psychology students completed the Time 1 online questionnaire, distributed via the University's research participation website during November 2011. Participants were emailed 3 months later with a link to the second questionnaire. In total, 113 participants completed the second questionnaire, representing an attrition rate of 29%. The final sample consisted of 100 females and 13 males, aged between 18 and 50 years old (M = 19.9 years, SD = 3.38).

Questionnaires

We created online questionnaires using Macromedia Dreamweaver MX software (Macromedia, Inc., United States). Items formed part of a larger questionnaire on identity-related issues. The beginning of the first questionnaire briefly detailed the aims and longitudinal nature of the study, and informed participants of their right to withdraw. Participants were asked to provide their email addresses so we could contact them again with a link to the second questionnaire and match their responses.

The next page of the questionnaire asked participants to list five networks and five categories of people, of which they considered themselves members. Asking for groups and categories that participants considered themselves to be members of ensures that the groups and categories are not imposed or ascribed, and instead are psychologically meaningful parts of their self-concept (e.g. Turner et al., 1987, Hypothesis 4). We specified that categories of people *"can be very large and inclusive such as race or religion, or more exclusive, such as [name of university] psychology student. You do not have to know all the members of the category that you write down, you only need to consider yourself a member of that category"*, whereas networks were *"anything from formal organisations to informal friendship*

groups but you should know all or most of the members of the group personally". Thus, our definitions of categories and networks focus on the links between the members. The group memberships that each participant listed were re-displayed on subsequent pages of the questionnaire so that participants could see their own responses when they completed ratings about them. The most common network groups listed by respondents were their family, friends, and flatmates groups, whereas the most common social categories were their nationality, university, and gender, suggesting that respondents understood and responded to our instructions as planned.

Each subsequent page began with a new item, followed by ten 11-point rating scales, one for each of the group memberships. The belonging item was on the first page (*"How much does being a member of each group or category give you a feeling of "belonging"?*", all scale anchors were 0 = *Not at all*, 5 = *moderately*, 10 = *extremely).* We decide to use a single item measure of belonging for two reasons. Firstly, as respondents have to answer this question 10 times, once for each group and category, we wanted to minimise the load on participants and avoid them having to answer several very similar items numerous times. Second, the item does not give any indication of what we mean by feelings of *"belonging"*, and therefore does not predispose or encourage respondents to conceptualise belonging in any particular way, which could possibly confound our results. The use of single item measures has also been well established through past research (e.g. Easterbrook & Vignoles, 2012a; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006), giving us confidence in the robustness of our measure.

We then included four items tapping the quality and quantity of interpersonal interactions within each group, representing an Interpersonal Bonds latent factor, and four items tapping perceptions of group homogeneity and self-stereotypicality, representing an Intragroup Similarity factor. The Interpersonal Bonds items assessed intimacy (*"How close do you feel with the other members of each group or category?"*) and interdependence (*"How much do the members of each group or category depend upon each other?"*) between the members, knowledge of the members (*"How well do you know the other members of each group or category?"*), and sociability within the group (*"How sociable are you within the group or category?"*). The Intragroup Similarity factor was measured by items assessing perceptions of the self as a typical and average group member ("*For each group or*

category, how much do you see yourself as a typical member?", and "*In everyday situations, how closely do you think your thoughts and behaviours match those of a typical member of each group or category"*), group homogeneity (*"Within each group or category, how similar do you feel the members are to each other?"*), and feelings of similarity to the average group member (*"How similar do you feel to the average member of each group or category?"*). Finally, participants were asked to provide some demographic information and thanked for their participation, with a reminder that the second questionnaire would be emailed to them during the next academic term.

Three months later, we emailed participants a link to the second questionnaire. The first page reminded participants of the study details and their right to withdraw, and asked participants to provide their email address so that their Time 1 responses could be retrieved. The group memberships that participants had provided during the Time 1 questionnaire were automatically retrieved and displayed alongside the ratings referring to them. On the next page, participants indicated if they still considered themselves a member of each group, followed by the belonging item, identical in format to the Time 1 measure. Participants were instructed to ignore ratings about groups that they were no longer members of, and these groups were excluded from our analyses. Finally, participants were shown a debriefing sheet and thanked for their participation.

Results

Analytic Strategy

We used Time 1 ratings for all variables as well as the Time 2 Belonging ratings. The data have a multilevel structure, with self-reported group memberships (Level 1) nested within participants (Level 2). To separate within-person from between-person effects, we conducted multilevel structural equation modelling using Mplus version 6 (Muthen & Muthen, 2010). Although we were primarily interested in the theoretically important within-person effects, we specified similar models at both the within- and between-person levels of analysis to control statistically for between-person effects (Figure 2.1). The within-person effects represent the within-person relationships between the different ratings for participants' group memberships, enabling us to investigate if feelings of belonging are associated with different antecedents depending upon the type of group involved. The between-

person effects represent systematic differences between people in how they respond to the items in general, after accounting for the theoretically important relationships between the within-person ratings for groups memberships. Thus, although the between-person level of analysis is theoretically unimportant and unrelated to our hypotheses, it allows us to control for any person-level response tendencies, such as response bias or social desirability effects, and ensures these are removed from the within-person estimates. Therefore, we henceforth focus only on the within-person effects. Zero order correlations are shown in Table 2.1.

To reduce the impact of within-person differences in the mean levels of responses between self-reported social categories and network groups, we centred all variables within each group type (subtracting the overall mean for categories from the responses related to category memberships, and subtracting the overall mean for networks from the responses related to network memberships). This ensures that any differences we find between the types of groups in the within-person relationships will not be due to one type of group having higher mean ratings that the other. However, this still ignores any possible differences between categories and networks in the covariances among variables that occur at the between-person level, which could further confound our results. To control for this, as well as to enable us to test if the paths from each factor to the belonging variables are significant for each group type, and whether they are statistically different from each other, we created two versions of all the variables, one representing responses for category memberships, the other representing responses for network memberships. We did this by multiplying each variable by two dummy variables; one representing responses relating to category memberships (coded categories = 1; networks = 0), the other representing responses relating to network memberships (coded categories = 0; networks = 1). Thus, we were able to model both within- and between- person effects separately for categories and networks, whilst controlling for the multilevel structure and for differences in variable means and covariances across the group types (Figure 2.1).

Table 2.1: Zero order correlations between the raw scores. The top panel contains ratings for category memberships, with within-person correlations above the diagonal, N = 385, and between-person below N = 113. The bottom panel contains ratings for network memberships, with within-person correlations above the diagonal, N = 342, and between-person below, N = 113. Continued…

		1	2	3	4	5	6	7	8	9	10
Category ratings											
1	Time 1 Belonging	-	.38	.39	.52	.29	.33	.33	.33	.33	.46
2	Knowledge	.42	-	.52	.67	.43	.41	.28	.29	.35	.29
3	Interdependence	.43	.73	-	.61	.46	.43	.32	.31	.44	.35
4	Intimacy	.48	.73	.80	-	.58	.49	.38	.39	.42	.44
5	Sociable	.15	.44	.49	.53	-	.36	.40	.47	.41	.35
6	Homogenous	.35	.42	.50	.56	.37	-	.39	.50	.54	.30
7	Stereotypical	.25	.20	.27	.24	.37	.42	-	.53	.44	.36
8	Similar	.17	.20	.24	.27	.37	.53	.41	-	.44	.38
9	Prototypical	.32	.46	.60	.47	.42	.59	.45	.38	-	.29
10	Time 2 Belonging	.45	.28	.35	.37	.25	.27	.31	.31	.17	-
	Mean	5.18	2.45	3.28	3.06	4.52	4.23	5.12	4.58	3.81	5.52
	SD	2.77	2.36	2.48	2.51	2.69	2.54	2.56	2.41	2.56	2.45

Table 2.1: …continued.

		1	2	3	4	5	6	7	8	9	10
Network ratings											
1	Time 1 Belonging	-	.66	.62	.74	.56	.43	.51	.55	.43	.62
2	Knowledge	.56	-	.68	.83	.60	.45	.50	.55	.45	.56
3	Interdependence	.49	.76	-	.70	.60	.48	.54	.56	.50	.49
4	Intimacy	.73	.72	.74	-	.73	.52	.57	.63	.53	.63
5	Sociable	.46	.62	.66	.90	-	.45	.56	.64	.56	.56
6	Homogenous	.14	.19	.53	.28	.24	-	.53	.74	.58	.40
7	Stereotypical	.43	.46	.61	.67	.53	.60	-	.67	.58	.41
8	Similar	.46	.45	.75	.62	.56	.76	.72	-	.62	.46
9	Prototypical	.23	.28	.49	.39	.37	.65	.58	.62	-	.43
10	Time 2 Belonging	.29	.27	.22	.45	.62	-.03	.20	.33	.15	-
	Mean	7.85	8.08	7.19	7.63	8.04	6.57	7.07	6.50	5.55	7.18
	SD	2.08	2.25	2.16	2.41	2.07	2.24	2.39	2.27	2.52	2.26

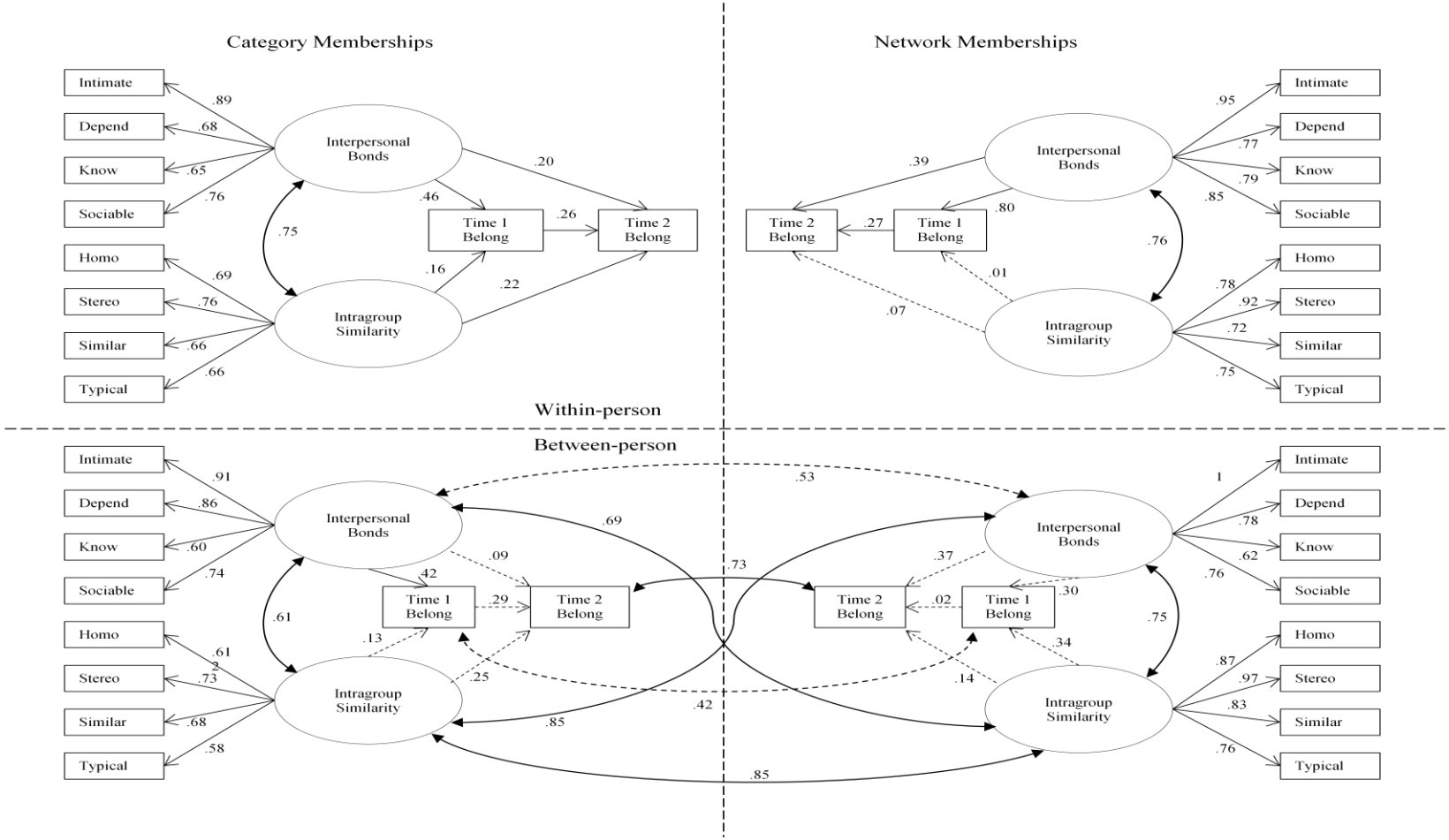


Figure 2.1: Structural model with standardised estimates. Paths shown with solid lines are significant at $p < .05$, whereas paths shown with dotted lines are non-significant. Within-person level is shown above the horizontal dotted line, between-person level is show below the horizontal dotted line. Estimates for category memberships are shown to the left of the dotted vertical line, network group estimates are show to the right of the vertical dotted line.

Measurement Model

Firstly, we tested our proposed measurement model, to investigate if items for group homogeneity, perceptions of the self as a typical and an average group member, and feelings of similarity to the average group member, loaded onto an Intragroup Similarity factor, whereas items for intimacy, interdependence, sociability, and knowledge of group members loaded separately onto an Interpersonal Bonds factor, across group types and across levels of analysis. Because of our data structure, at the within-person level we allowed these factors to covary within, but not across, group types, whereas at the between-person level we allowed factors to covary within and across group types.

We first investigated if the factor loadings were invariant across group types and levels of analysis. A constrained model showed an adequate fit, and resulted in a change of <.01 in comparative fit index [CFI] from the unconstrained model, indicating that the loadings were invariant across group types and levels of analyses (Cheung & Rensvold, 2002; Davidov, Schmidt, & Schwartz, 2008; Little, Card, Slegers, & Ledford, 2007). Hence, we constrained these loadings to be equal in all subsequent models.

The resulting measurement model showed adequate fit indices according to Kline's (2005) criteria, $\chi^2(235) = 633.05$, $p < .001$, CFI = .94, root mean square error of approximation (RMSEA) = .05, standardised root mean residual (SRMR) = .08, indicating that the two factor solution was appropriate, with items loading distinctly on either the Interpersonal Bonds or Intragroup Similarity factors separately for both group types. We also assessed the fit of an alternative model where the indicators loaded onto a single factor for each group type. This model showed poor fit indices, $\chi^2(245) = 1390.715$, $p < .001$, CFI = .83, RMSEA = .08, SRMR = .09, and was a significantly worse fit compared to our proposed model, $\Delta\chi^2(10) = 757.67$, $p < .001$.

Structural Model

We next created a structural model to test our main hypotheses (standardised estimates are shown in Figure 2.1, unstandardised estimates are reported below). The structural model showed adequate fit indices $\chi^2(357) = 816.35$, $p < .001$, CFI = .94, RMSEA = .04, SRMR = .07. We tested the theoretically important paths from the two factors to Time 2 Belonging, while controlling for a path from Time 1 Belonging to

Time 2 Belonging, at both levels of analysis. We also included a cross-sectional test of our hypotheses by including paths from these factors to Time 1 Belonging within each group type and across both levels of analysis. At the within-person level, we allowed the Interpersonal Bonds factor to covary with the Intragroup Similarity factor within, but not across, group types.

Although we specified similar models at both levels of analyses, we were primarily interested in the within-person effects. We included between-person effects as a statistical control to ensure that the within-person relationships were not confounded by between-person relationships, Hence, our model included the same paths between our variables at the between-person level, and we also added covariances between the two factors, between the two Time 1 Belonging variables, and between the two Time 2 Belonging variables, both within and across group types. As explained above, relationships among variables at the between-participant level may be confounded by individual-level response tendencies, such as acquiescence and social desirability. They are, therefore, included only as statistical controls and bear no relation to our hypotheses.

Although our main focus was on the prospective predictions of Time 2 Belonging, our model also allows us to simultaneously test our hypotheses cross-sectionally. At the within-person level, Time 1 Belonging was positively predicted by the Time 1 Intragroup Similarity factor for categories (B = .266, p = .020), but not for networks, (B = .001, p = .986), in line with H1. In contrast, the Time 1 Interpersonal Bonds factor positively predicted Time 1 Belonging for both interpersonal networks (B = .731, p < .001), in line with H2, as well as for categories (B = .583, p < .001).

At the theoretically important within-person level, controlling for Time 1 Belonging, the Intragroup Similarity factor positively predicted Time 2 Belonging for categories (B = .323, p = .001), but not for networks (B = .100, p = .184), supporting H1. In contrast, the Interpersonal Bonds factor positively predicted Time 2 Belonging for networks (B = .391, p < .001) in line with H2, but also for categories (B = .218, p = .004).

We tested if the model fit decreased once the paths from the factors to the belonging variables were constrained to be equal across group types. A model imposing equality constraints across both group types on the within-person paths from

the Intragroup Similarity factors to Time 1 Belonging and to Time 2 Belonging was a significantly worse fit, $\chi^2(2) = 7.33$, $p = .026$, suggesting that the Intragroup Similarity factor was a significantly stronger predictor of feelings of belonging for social categories compared to network groups, supporting H1. A model with an equality constraint on the within-person paths from the Interpersonal Bonds factors to Time 1 Belonging and to Time 2 Belonging, was a marginally worse fit, $\chi^2(2) = 4.98$, $p = .083$, indicating that Interpersonal Bonds was a marginally stronger predictor of belonging for network groups compared to social categories, in line with H2.

Discussion

Over a three-month period, whilst controlling for initial feelings of belonging and the multilevel structure of the data, our results indicate that feelings of belonging have different antecedents depending on the type of group with which they are associated. Categorical perceptions proposed by the social identity perspective only predicted feelings of belonging that were associated with groups that participants had listed as social categories (H1). Frequent interactions and intimate bonds with other group members, however, predicted feelings of belonging associated with groups that participants had listed as interpersonal networks (H2) and as social categories, although slightly more strongly for network groups. Self-categorisation processes, then, did not predict feelings of belonging gained from memberships within networks. A simultaneous cross-sectional test of our hypotheses gave similar results. Furthermore, tests of model constraints confirmed that the Intragroup Similarity factor was a stronger predictor of belonging for category memberships compared to networks, whereas the Interpersonal Bonds factor was a marginally stronger predictor of belonging for network memberships compared to categories.

An unexpected finding was that feelings of belonging associated with category memberships were predicted by the interpersonal bonds between category members. In hindsight, however, this makes good sense. Harb and Smith (2008) argue that thinking about a social category membership could lead to a focus on a particular relationship with a fellow category member, and several researchers have argued that network groups are often formed within categories (Deaux & Martin, 2003; Serpe & Stryker, 2011; Stets & Burke, 2000), suggesting category memberships may be associated with

intimate relationships, as our results suggest. Another possible factor is the large proportion of females in our sample. Researchers have argued that women orientate their sociality and gain feelings of belonging mainly through dyadic relationships, whereas men are orientated towards wider social spheres (Baumeister & Sommer, 1997). Thus, it seems possible that a predominantly male sample would have shown an even greater distinction between networks and categories than was apparent here. An interesting avenue for future research would be to investigate the conditions under which category memberships are perceived solely as depersonalised collectives rather than interpersonal relationships.

To our knowledge, this study is among the first to investigate directly how memberships within different types of groups can give rise to feelings of belonging (but see Gardner et al., 2000). However, some researchers have made further distinctions between different types of groups, such as intimacy and task groups (e.g. Lickel, Hamilton, Lewis, Sherman, & Uhles, 2000), and future research should investigate possible differences in how feelings of belonging are gained from memberships within these types of groups. Furthermore, although our longitudinal design allows more confidence in the directionality of effects than cross-sectional designs, future research would benefit from experimental manipulations to establish causality more clearly. A further interesting avenue for research would be to investigate if these findings replicate across cultures. Yuki (2003, 2011) has argued that, within collectivistic cultures, even large social categories are seen as networks of relationships rather than depersonalised collectives, suggesting that perceptions of intragroup similarity may be more important for feelings of belonging within individualistic cultures, something that future research should investigate.

Despite these limitations, our results show that feelings of belonging are gained differently from memberships within different types of groups. The self-categorisation processes of self-stereotyping and perceptions of category homogeneity predicted feelings of belonging only for memberships of social categories, but were unrelated to memberships of network memberships. Interpersonal bonds among the group members predicted feelings of belonging associated with memberships of both social categories and network groups. This suggests that, although feelings of belonging can be gained from both network groups and social categories, they are gained through different

processes. Our results highlight the importance of distinguishing between different types of groups, adding to a growing literature suggesting that memberships within different types of groups are psychologically different.

PAPER 3: Flushing friendship formation down the toilet: Design features of shared accommodation influence the development of interpersonal bonds and well-being

Matt Easterbrook and Vivian L. Vignoles
University of Sussex

Reference:
Easterbrook, M., & Vignoles, V. L. (2012). Flushing friendship formation down the toilet: Design features of shared accommodation influence the development of interpersonal bonds and well-being. *Manuscript submitted for publication.*

Abstract

Despite its omnipresence, the influence of the built environment upon human psychology is poorly understood. In a five-wave longitudinal study, we investigated if the physical design of shared student accommodation affected the frequency of unplanned face-to-face meetings between new roommates, and how this influenced their interpersonal bonds and psychological well-being. Multilevel latent growth modelling on responses from 462 university residents revealed that flats with design features that encouraged the use of communal areas—the presence of a shared common area and the absence of ensuite toilets—increased the frequency of unplanned face-to-face meetings between roommates. This predicted the development of interpersonal bonds between roommates, which, in turn, predicted their well-being. Our findings provide an empirical basis for the development of shared housing designed to increase the relationships and well-being of residents.

Introduction

Researchers have shown that the built environment can symbolise a nation's history (Devine-Wright & Lyons, 1997), embody a culture's values and traditions (Ozaki, 2002, 2003), and encourage or discourage community participation or crime (Newman, 1973; Perkins, Florin, Rich, Wandersman, & Chavis, 1990). More recently, psychologists have shown that the way people utilize the built environment can reflect their perceptions and internal cognitive processes (e.g. Dixon & Durrheim, 2003; Novelli, Drury, & Reicher, 2010; see also Marsh, Johnston, Richardson, & Schmidt, 2009). However, despite these intriguing findings, there is surprisingly little known about how the built environment can affect basic social psychological processes.

We report a longitudinal study investigating the development of interpersonal bonds and well-being among new residents in shared accommodation. We hypothesised that physical design features that encourage the use of communal areas—in particular, the presence of common rooms and the absence of ensuite toilets—would increase the frequency of coincidental meetings between new housemates. We expected that this, in turn, would aid the development of interpersonal bonds between the housemates, with positive consequences for their well-being. Thus, we sought to demonstrate a social

psychological mechanism through which physical design features can have an impact upon the relationships and well-being of residents of shared accommodation.

Past Research

One of the first and best-known studies that investigated the influence of the built environment on human psychology was conducted by Festinger, Schachter, and Back (1950). They found that residents of university flat blocks were more likely to be friends if they lived physically, but also functionally, closer to one another. Functional distance is the likelihood that one resident will meet another as they go along their daily paths. For example, Festinger and colleagues found that people who had to pass the entrances of others' homes in order to reach their own received more friendship ratings from other residents than did those who could enter their homes directly from the street. Festinger and colleagues explained their findings by suggesting that the built environment can structure people's movements and facilitate coincidental meetings between people, which can then develop into interpersonal relationships (see also Greenbaum, 1982, Kuo, Sullivan, Coley, & Brunson, 1998). However, they did not measure the amount of coincidental interactions between the residents, nor did they study the development of friendships over time, leaving important questions unanswered.

Festinger and colleagues' (1950) argument that functional distance, rather than mere physical proximity, is the key to understanding how the built environment can facilitate friendship formation has also received support from a study by Ebbesen, Kjos, and Konecni (1976). They found that, while the physical distance between people's homes predicted both positive and negative friendship ratings, only the positive friendship ratings were related to the number of times the residents saw each other socially. This suggests that physical proximity simply polarises people's opinions towards each other, but that face-to-face meetings act as a catalyst for friendship formation. This offers an explanation for why the use of communal residential areas has been found to increase community cohesion and neighbourhood social ties (Kou et al., 1998). However, Ebbesen and colleagues did not link features of the physical environment to the frequency of face-to-face interactions, and their cross-sectional design leaves obvious questions regarding the direction of causality. Nonetheless, the

above two studies provide suggestive evidence that physical environments can influence the frequency of coincidental face-to-face interactions, which, in turn, can lay the foundations for the development of friendships between neighbours.

More recently, studies have begun to identify particular physical structures within the built environment that appear to influence the connections between residents. Perkins and colleagues (1990) found that people were less likely to participate in community activities if they had barriers—such as fences or hedges—on their property, suggesting that privacy structures can decrease people's connections to their community. Speller, Lyons, and Twigger-Ross (2002) conducted a longitudinal qualitative study into the relocation of a traditional English mining village. The old village consisted of five rows of terraced houses with no front gardens or dividing barriers, so that the residents often came into contact with each other as soon as they left their homes. The new village had many more privacy structures, consisting of semi-detached houses surrounded by high-fenced gardens that decreased the visibility of the residents to each other, as well as the frequency of opportunities they had for social interactions. Many of the residents complained that the move to the new village eroded the strong sense of community and increased their sense of isolation, suggesting that structures which inhibit face-to-face meetings can erode the bonds between neighbours.

Only a few studies have investigated the effects of internal structures on residents of shared accommodation. Baum and Davis (1980) tested the effects of inserting a wall in the middle of several long corridors within student housing, splitting them into two shorter ones. They found that groups formed more readily within the short corridors, and this was related to lower levels of crowding stress. Research on institutionalised patients has found that simply rearranging furniture in a way that encourages patients to interact, such as arranging chairs to face each other in close proximity, can decrease isolated behaviours and increase social interaction (for a review see Evans, 2003). This suggests that internal design features, as well as external structures, may have important effects on the social interactions of residents.

Taken together, the studies reviewed here suggest that architectural design features of shared accommodation that promote the use of communal areas and decrease privacy can increase the frequency with which residents coincidentally meet each other face-to-face, which, in turn, aids in the development of interpersonal bonds between

residents (see also Connidis, 1989; Drolet & Morris, 2000; Pettigrew & Tropp, 2006, 2008). Empirical evidence has shown that there are considerable benefits to health and well-being to be gained from both group memberships and interpersonal relationships (Baumeister & Leary, 1995; Birditt & Antonucci, 2007; Sani, 2011). Thus, it may be possible to increase people's well-being through designing physical environments in ways that promote face-to-face contact between people, as this could foster the development of friendships and improve well-being.

The Current Study

Given the recent increase in the proportion of people living in shared accommodation (McNamara & Connell, 2007; National Landlords Association, 2012), it is important to understand how internal designs of shared accommodation can influence residents' relationships and well-being. Most previous research has focused on the influence of external structures on residents' behaviours and relationships, largely ignoring the effects of internal structures (for an exception, see Baum & Davis, 1980). The current study, therefore, focuses on the internal physical designs of shared university accommodation.

We conducted our research at an English university which provides accommodation for all first-year students. The accommodation consists of several halls of residence made up of numerous flats or floors containing the residents' bedrooms. Some flats/floors have a common seating area, such as a lounge, whereas other do not. Some have ensuite toilets attached to the individual bedrooms, whereas others only have shared facilities. We expected these two features to influence the frequency of unplanned meetings between the housemates, but through different processes: Common areas provide housemates with shared space where they can spend time. Any two people who use the area at the same time will meet, hence the presence of a common room is likely to increase the frequency of unplanned meetings between the housemates. The absence of an ensuite toilet, however, requires residents to enter the communal areas whenever they need to use the facilities, increasing the chances of meetings between housemates in a more mundane and less apparent way.

We aim to show, for the first time, that the physical environment can influence people's well-being through its influence on the pattern of interpersonal interactions and

hence the development of friendships between residents. We sought to test directly the mechanism through which Festinger et al. (1950) originally proposed that the built environment influences friendships, by including measures of the frequency of the residents' *unplanned* meetings. This provides an indication of how the physical design of the built environment can constrain or facilitate unplanned social interactions, and disentangles any possible confounds of intentional meetings between the residents, which may be influenced more by the residents' dispositional sociability or existing relationships.

We collected data from newly acquainted residents in shared accommodation, enabling us to study how the environment can influence the formation of interpersonal bonds. This is particularly important within the study's context given that successful relationship formation is known to predict students' adaptation following the life transition to university (Hays & Oxley, 1986; Ruble & Seidman, 1996). We used a longitudinal design to track the development of these interpersonal bonds, as well as the residents' well-being, over time. Thus, we were able to test for indirect effects of the built environment on initial levels and subsequent trajectories of residents' interpersonal relationships and their well-being. We began our study within the first week of respondents' stay in shared accommodation, allowing us to examine the early stages of relationship formation. We chose the whole of the ten-week term as the study period, as this has been shown to be enough time for differences in the built environment to influence the relationships between residents (Baum & Davis, 1980), and to avoid any confounding influence of the Christmas break, when most students return to their pre-university accommodation.

We expected that residents of flats with structures that promote face-to-face interaction (i.e., with common rooms and without ensuite toilets) would develop stronger interpersonal bonds, in comparison to residents who live in flats without these structures. We expected that these links would be fully mediated by the influence of the structures on the frequency of coincidental meetings between the housemates. Furthermore, we predicted that residents with stronger interpersonal bonds would show higher positive and lower negative well-being; thus, we expected to find significant indirect pathways from structural features of the flats to these measures of well-being.

Method

Participants and Procedure

The University's residential department emailed all University residents within the first week of their stay at University accommodation inviting them to take part in a longitudinal research project. The email stated that those who completed all five time points would be entered into a draw for one prize of £100 and four prizes of £50, and provided a link to the first questionnaire. The initial questionnaire was online for the first 2 weeks of term. A link to a new questionnaire was emailed to respondents at the beginning of Weeks 4, 6, 8, and 10, with each questionnaire online for 1 week. To reduce attrition, we created a second draw with two prizes of £25 for participants who missed any intermediary time points (2-4). 504 residents from 328 flats completed the Time 1 questionnaire (65% females, mean age = 21.09 years, *SD* = 5.26), with 127 completing all 5 time points (59% females, mean age = 20.12 years, *SD* = 4.02).[3.1] We excluded 16 participants who moved flats during the study, while a further 26 participants provided insufficient data, leaving 462 residents from 298 flats in our final analyses.

Questionnaire and Measures

Measures were included in a larger online study focusing on identity and group processes (see also Easterbrook & Vignoles, 2012a)[3.2], created using Macromedia Dreamweaver MX software (Macromedia, Inc., US). At the start of each questionnaire, respondents indicated which halls of residence they lived in and the flat or floor number that contained their individual bedroom. These answers were automatically inserted into the wording of subsequent items asking about respondents' flat/floor.

To measure the quality of Interpersonal Bonds with housemates, we included four items created by Easterbrook and Vignoles (2012b). The measure uses an 11-point rating scale (anchors: 0 = *Not at all*, 10 = *extremely*), and showed excellent reliabilities across the five time points (Table 3.1). The items were *"How close do you feel to the other members of flat (or floor) #?", "How much do the housemates of flat (or floor) # depend upon each other?", "How well do you know the other residents of flat (or floor) #?"*, and *"How sociable are you with the people who live in flat (or floor) #?"*.

We chose Diener and Emmons' (1984) list of nine adjectives assessing affect valance to measure both positive and negative *well-being* [WB]. This measure has been shown to vary over short time periods (e.g. Emmons, 1991; Reis, Sheldon, & Gable, 2000), and has been frequently used in past research. The measure was included on a single page in all five questionnaires, at the top of which was the question *"To what extent have you experienced the following emotions today?"*. Each adjective had a 7-point rating scale, (anchors: 1 = *Not at all*, 7 = *extremely*). As positive and negative affect are often independent of each other (Diener & Emmons, 1984), we treated Positive and Negative WB separately in our analyses. Both scales showed excellent reliabilities across the five time points (Table 3.1).

Towards the end of the first questionnaire we asked whether the respondent's flat contained a common room, such as a dining area or lounge (78% responded *'yes'*), and whether their bedroom had an ensuite toilet (34% responded *'yes'*). We also asked *"How often, on average, do you coincidentally bump into your roommates in and around the flat?"* (henceforth 'Coincidental Meetings'), and offered six possible responses (*"Once a week", "A few times a week" , "Once a day", "2-4 times a day", "5-10 times a day", "More than 10 times a day"*, respectively coded 1-6). We chose this response format rather than a Likert-type rating scale to encourage respondents to answer as objectively as possible.

At the end of the first questionnaire, we asked respondents their age and gender.

Table 3.1: Descriptive statistics and reliabilities for Meetings and the time-varying measures.

	Common Room				Ensuite Toilet				
	With		Without		With		Without		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	α
Coincidental Meetings									
Time 1	4.79	1.20	4.64	1.47	4.57	1.32	4.89	1.18	-
Interpersonal Bonds									
Time 1	5.82	2.31	5.56	2.35	5.56	2.60	6.03	2.11	.92
Time 2	6.27	2.15	6.55	2.59	5.98	2.46	6.54	2.14	.92
Time 3	6.14	2.31	6.27	2.89	5.91	2.54	6.31	2.42	.94
Time 4	6.26	2.48	6.03	2.91	5.98	2.73	6.36	2.55	.95
Time 5	6.22	2.62	6.10	2.81	6.18	2.68	6.17	2.72	.95
Positive WB									
Time 1	4.58	1.29	4.45	1.34	4.63	1.32	4.57	1.30	.88
Time 2	4.47	1.34	4.46	1.45	4.04	1.45	4.33	1.31	.90
Time 3	3.99	1.36	4.23	1.74	4.08	1.69	4.06	1.47	.91
Time 4	4.02	1.37	4.46	1.83	4.11	1.32	4.18	1.58	.92
Time 5	4.00	1.51	4.31	1.66	4.26	1.65	4.03	1.66	.92
Negative WB									
Time 1	2.34	1.24	2.29	1.18	2.20	1.13	2.35	1.20	.83
Time 2	2.42	1.18	2.58	1.32	2.50	1.38	2.46	1.13	.82
Time 3	2.46	1.28	2.56	1.58	2.24	1.33	2.59	1.35	.86
Time 4	2.36	1.21	2.18	1.34	2.14	1.09	2.43	1.34	.84
Time 5	2.40	1.30	2.49	1.54	2.15	1.31	2.50	1.40	.87

Table 3.2: Correlations between the variables at each time point.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	T1 Bonds	-	.38	-.24	.73	.18	-.07	.66	.20	-.11	.62	.18	.02	.61	.13	-.08	.46	.01	.10
2	T1 Positive WB		-	-.40	.37	.40	-.11	.32	.41	-.07	.26	.38	-.10	.31	.42	-.14	.23	-.01	-.02
3	T1 Negative WB			-	-.12	-.18	.35	-.22	-.16	.48	-.12	-.08	.42	-.13	-.05	.42	.00	-.02	.06
4	T2 Bonds				-	.29	-.25	.89	.34	-.15	.82	.29	-.06	.85	.22	-.14	.35	.05	.12
5	T2 Positive WB					-	-.22	.21	.55	-.07	.16	.51	-.09	.20	.43	-.09	.11	.08	.10
6	T2 Negative WB						-	-.24	-.07	.36	-.11	-.05	.42	-.19	-.02	.33	-.05	.05	-.02
7	T3 Bonds							-	.31	-.18	.88	.30	-.18	.89	.19	-.19	.35	.02	.08
8	T3 Positive WB								-	-.22	.35	.62	-.09	.36	.48	-.13	.09	.07	-.01
9	T3 Negative WB									-	-.19	-.04	.55	-.23	-.13	.54	-.08	.03	.12
10	T4 Bonds										-	.32	-.13	.91	.27	-.24	.31	-.04	.07
11	T4 Positive WB											-	-.22	.31	.59	-.24	.09	.12	.02
12	T4 Negative WB												-	-.20	-.20	.59	.07	-.06	.11
13	T5 Bonds													-	.30	-.26	.25	-.04	.25
14	T5 Positive WB														-	-.39	.00	.12	.00
15	T5 Negative WB															-	-.10	-.06	-.10
16	C. Meetings																-	.05	-.12
17	Common Room																	-	.27
18	Ensuite																		-

Results

We conducted multilevel latent growth modelling to analyse our longitudinal data. Latent growth modelling uses a single level of analysis to model within-person change by estimating two latent factors for each time-varying variable; one representing the initial value of the variable at Time 1, labelled the intercept, and the other representing the change in this value over time, labelled the slope. These factors together constitute the variable's growth curve (Singer & Willett, 2003). To account for the clustering of individuals within flats, we conducted two-level latent growth modelling (Muthén, 1994), with individuals at Level 1 and flats at Level 2, using Mplus version 6 with maximum likelihood estimation with robust standard errors (Muthén & Muthén, 2010). Zero order correlations are shown in Table 3.2.[3.3]

Measurement Model

We first created a measurement model for the growth curves of Interpersonal Bonds and of Positive and Negative WB, allowing the three intercepts to covary, and the three slopes to covary. This model showed adequate fit according to Kline's (2005) criteria, χ^2 (204) = 439.19, p <.001, Comparative Fit Index [CFI] = .90, Root Mean Square Error of Approximation [RMSEA] = .05. More information is given in the Supplemental Materials, including a diagram of the model (Figure 3.2), and a table of means, standard errors, and residual variance components (Table 3.3).

Structural Model

We next analysed a structural model in order to test our hypotheses. Figure 3.1 shows the significant substantive paths in the model, which showed adequate fit according to Kline's (2005) criteria, χ^2 (276) = 527.07, p <.001, CFI = .90, RMSEA = .04.[3.4]

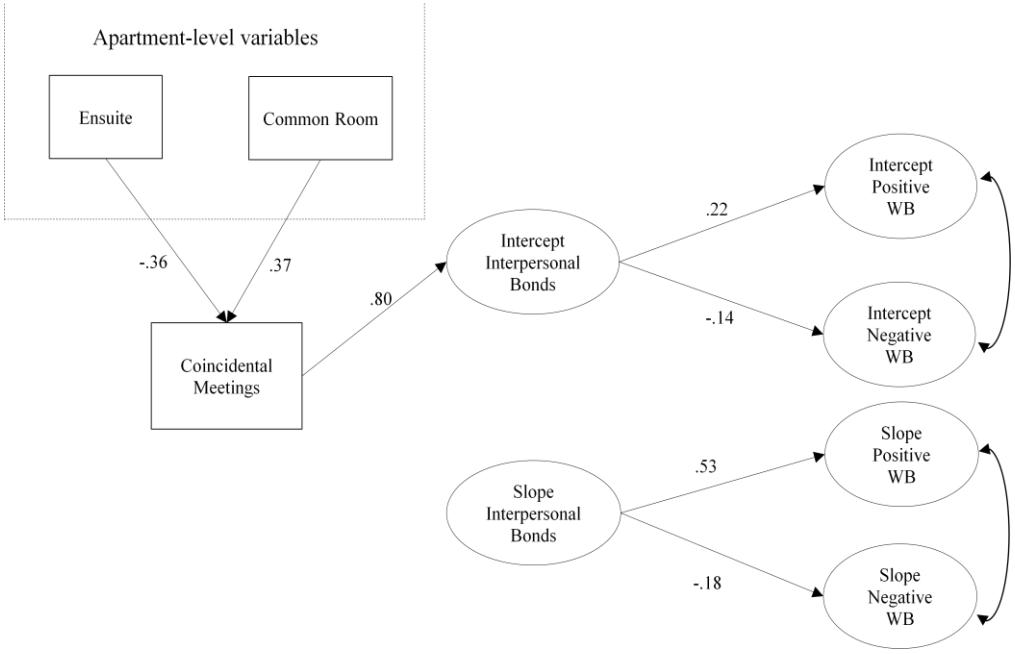


Figure 3.1: The significant substantive paths (excluding age and gender and covariances between items) in the two-level structural model, with unstandardised estimates. As all paths associated with the growth curves were constrained to be equal at the individual- (N = 462) and flat-levels of analysis (N = 298), they are represented as a single-level.

Within this model, we regressed Coincidental Meetings on both Common Room and Ensuite. Common Room positively predicted Coincidental Meetings (B = 0.37, p = .035), whereas Ensuite negatively predicted Coincidental Meetings (B = -0.36, p = .005).[3.5]

We regressed both the intercept and slope of Interpersonal Bonds on Common Room, Ensuite, and Coincidental Meetings. Coincidental Meetings positively predicted the intercept for Interpersonal Bonds (B = 0.80, p < .001), indicating that respondents who coincidentally met their roommates more frequently had stronger initial bonds with them. In line with our hypothesised mediation, neither Common Room (B = -0.11, p = .681) nor Ensuite (B = -0.26, p = .247) directly predicted the intercept for Interpersonal Bonds, whereas both variables showed significant indirect effects: Common Room positively predicted (B = 0.29, p = .030), and Ensuite negatively predicted (B = -0.28, p = .009), the intercept for Interpersonal Bonds indirectly through their impact on Coincidental Meetings. There were no significant paths from Common Room (direct: B

= 0.01, p = .954; indirect: B = -0.01, p = 241), Ensuite (direct: B = 0.08, p = .247; indirect: B = 0.01, p = .255) , or Coincidental Meetings (B = -0.04, p = .208) to the slope for Interpersonal Bonds, indicating that the initial direct and indirect effects of Common Room, Ensuite, and Coincidental Meetings on Interpersonal Bonds were maintained throughout the study period.

We regressed the intercept of Positive WB on the intercept for Interpersonal Bonds, Coincidental Meetings, Common Room, and Ensuite. The intercept for Interpersonal Bonds positively predicted the intercept for Positive WB (B = 0.22, p < .001), indicating that those with stronger initial bonds with their roommates initially experienced more positive emotions. In line with our proposed mediation, there were no significant direct effects of Coincidental Meetings (B = -0.02, p = .752), Common Room (B = -0.03, p = .858), or Ensuite (B = -0.09 p = .452) on the intercept of Positive WB, whereas Common Room positively predicted (B = 0.07, p = .035), and Ensuite negatively predicted (B = -0.06, p = .018), the intercept for Positive WB indirectly, through Coincidental Meetings and the intercept for Interpersonal Bonds. We also regressed the slope of Positive WB on the slope for Interpersonal Bonds, Coincidental Meetings, Common Room, and Ensuite. The slope of Interpersonal Bonds positively predicted the slope of Positive WB (B = 0.53, p = .049), but there were no significant effects of Coincidental Meetings (B = 0.02, p = .408), Common Room (direct: B = -0.13, p = .124; indirect: B = 0.01, p = .866), nor Ensuite (direct: B = 0.07, p = .233; indirect: B = 0.02, p = .536) on the slope of Positive WB, indicating that the initial indirect effects of Common Room, Ensuite, and Coincidental Meetings on Positive WB were maintained throughout the study period.

We regressed the intercept of Negative WB on the intercept for Interpersonal Bonds, Coincidental Meetings, Common Room, and Ensuite. The intercept for Interpersonal Bonds negatively predicted the intercept for Negative WB (B = -0.14, p < .001), indicating those with stronger initial bonds with their roommates initially experienced fewer negative emotions. In line with our proposed mediation, there were no significant direct effects of Coincidental Meetings (B = -0.05 p = .459), Common Room (B = 0.02, p = .914), or Ensuite (B = -0.16 p = .181) on the intercept of Negative WB, whereas Common Room marginally negatively predicted (B = -0.04, p = .058), and Ensuite positively predicted (B = 0.04, p = .041), the intercept for Negative WB

indirectly, through Coincidental Meetings and the intercept for Interpersonal Bonds. We also regressed the slope of Negative WB on the slope for Interpersonal Bonds, Coincidental Meetings, Common Room, and Ensuite. The slope of Interpersonal Bonds negatively predicted the slope of Negative WB (B = -0.18, p = .017), but there were no significant effects of Coincidental Meetings (B = -0.04, p = .128), Common Room (direct: B = -0.01, p = .893; indirect: B = -0.01, p = .600), nor Ensuite (direct: B = -0.09, p = .103; indirect: B = 0.00, p = .880) on the slope of Negative WB, indicating that the initial indirect effects of Common Room, Ensuite, and Coincidental Meetings on Negative WB were maintained throughout the study period.[3.6]

Discussion

As predicted, our model shows that physical design features of shared flats that promote the use of communal areas can increase the frequency of unplanned meetings between the residents. These meetings act as precursors to the formation of interpersonal relationships between the roommates, which, in turn, are beneficial for their psychological well-being. Furthermore, we found significant indirect effects from these design features to both the formation of interpersonal bonds between roommates and their well-being, suggesting it is indeed the physical structures of the flat that are partly responsible for the variation in the development of interpersonal bonds between roommates and their well-being.

Interestingly, both the presence of a common room and the absence of ensuite toilets produced similar effects on coincidental meetings, interpersonal bonds, and well-being; if anything, ensuite toilets showed slightly stronger effects. Although people perceive privacy structures as socially isolating (Wallace, Ngo, Russak, 2011), they are increasingly sought after by residents (Ozaki, 2002), making our results all the more important in highlighting the detrimental effects that privacy structures may have for residents. However, it is important to remember that our research was conducted within shared student accommodation where there is a culture of sociability and friendship formation. Compared to other contexts, this is likely to amplify the effect of any physical structure that inhibits meeting other people. It may be, therefore, that other types of physical structures may have greater effects on the well-being of residents in other types of accommodation. We do not, therefore, advocate that ensuite toilets

should be removed from all shared accommodation, but take our results to suggest that the use of communal areas should be actively encouraged. This could be achieved through providing communal areas or making existing communal areas more appealing (e.g. Kuo et al., 1998). A further understanding of how to promote the use of internal communal areas is an interesting question that future research should investigate.

There are a few limitations to our study and potential avenues for future research. We measured how often the roommates coincidentally met each other only at the first time point of the study. Although our model suggests unplanned meetings are in part due to the physical structure of the flats and may therefore be stable over time, it would be interesting to investigate any changes in the frequency of these meetings, and how this may affect the roommates' interpersonal bonds and well-being. Furthermore, we had to rely on self-report measures of the frequency of unintentional meetings, which are not always objectively accurate. Although there are benefits to our focus on new roommates who have moved into shared accommodation, it prevents conclusions about the effects of the built environment on established groups or within unshared accommodation, both of which should be investigated by future research. The longer-term effects of these design features should also be studied, with investigations into whether the inhibitory effects of privacy structures on interpersonal relationships between roommates can be overcome over time.

Despite these limitations, our research clearly demonstrates the importance of the built environment to human psychology. Our results are the first to demonstrate the effect the physical environment can have on people's well-being, and to show the mechanism through which this happens: through its influence on the pattern of interpersonal interactions and hence the development of interpersonal bonds. We hope our results will provide an empirical basis upon which simple and cost effective structures can be designed to increase the well-being of the many people living in shared accommodation.

Supplemental Materials

Attrition Analyses

We conducted a series of MANOVAs on Time 1 values of Interpersonal Bonds, Positive and Negative WB, Coincidental Meetings, Age, and Gender, comparing those who completed the questionnaire at Time 2 (n = 249), Time 3 (n = 191), Time 4 (n = 188), and Time 5 (n = 181), against those who did not. This revealed small but significant multivariate differences between the samples only at Time 4 ($F(6, 441) = 2.18$, $p = .04$, $\eta^2 = .03$, all other time points: $F(6, 441) > 2.00$, ps $> .07$, $\eta^2 < .03$). Univariate analyses revealed the difference was due to a slightly higher proportion of males completing the Time 4 questionnaire than not completing it (39% vs. 28%), $\chi^2 (1) = 6.86$, $p = .01$, $\eta^2 = .01$. Further univariate analyses revealed that those who completed the Time 2 questionnaire were slightly younger (M = 20.67, SD = 4.57) than those who did not (M = 21.51, SD = 5.69), $F(1, 448) = 6.56$, $p = .01$, $\eta^2 = .02$, and a slightly higher proportion of males completed the Time 3 questionnaire than did not (39% vs. 28%), $\chi^2 (1) = 6.86$, $p = .01$, $\eta^2 = .01$. Although these differences appeared to be small, we controlled for Gender and Age in our main analyses.

Initial Analyses

Our data have a three-level structure, with individuals nested within flats, and flats nested within residences. Initial analyses using MLwiN version 2.25 (Rashbash, Browne, Healy, Cameron & Charlton, 2012) indicated that neither WB, Coincidental Meetings, nor Interpersonal Bonds variables significantly varied between residences (all ps $> .16$), indicating that it was unnecessary to account for the residence level of analysis (Hox, 2002). However, as these variables showed significant variation between individuals and flats (all ps $< .05$), and Ensuite and Common Room are both flat-level variables, we conducted two-level latent growth modelling (Muthén, 1994).

Measurement Model

Initial analyses revealed that the residual variances of the Bonds, Positive WB, and Negative WB variables were much larger at Time 1 than at any other time point. This is not surprising given the host of factors that are potentially impactful to these variables at the beginning of a life-transition such as moving to university. Thus, we

allowed the Time 1 residual variances to be freely estimated, but constrained the Time 2, Time 3, Time 4, and Time 5 residual variances to be equal within each growth curve. Following the recommendations of Singer and Willett (2003), we set the residual variances of the indicators at the flat level to zero.

Based on modification indices, we also included a covariance at the individual level between Positive and Negative WB at Time 1, again suggesting additional factors are influencing the Time 1 WB variables, as well as three individual-level covariances between adjacent time points in our measures: Positive WB at Time 1 and Time 2, and at Time 2 and Time 3, and Bonds at Time 2 and Time 3.

We also tested a model that included covariances between the intercepts and slopes for each of the three growth curves. This did not change the pattern of results nor did it improve the model fit for either the measurement model or the structural model, and so we excluded these covariances for greater parsimony.

Model Constraints

Effects of individual-level variables (Age and Gender) and flat-level variables (Ensuite and Common Room) were modelled at the appropriate level of analysis. Relationships among Coincidental Meetings, Interpersonal Bonds and WB were modelled at both levels, but were constrained to be equal across levels. We had no reason to predict differences in these relationships across levels of analysis, nor was our study designed to test for such differences. Constraining these effects to be equal across levels is preferable to modelling separate effects at the two levels of analysis given that 65% of the flats within our sample had data from just one resident (Firebaugh, 1980; Hofmann & Gavin, 1998). Moreover, a model without these constraints did not provide any improvement in model fit, $\Delta\chi^2$ (12) = 6.80, p = .871, supporting our use of the constrained model. We therefore report all path parameters as single estimates. Note that, when using maximum likelihood estimation with robust standard errors, the χ^2 statistics used for χ^2 difference tests must be scaled according to the steps proposed by Satorra & Bentler (1999). We therefore follow these steps for all reported χ^2 difference tests.

Alternative Models

In order to assess our proposed structural model against some plausible alternatives, we first created a trimmed version of our structural model, removing the direct paths from Common Room and Ensuite to the intercepts and slopes for Interpersonal Bonds, Positive WB, and Negative WB. This enables us to alter the order of the variables in the structural paths to test alternatives. This trimmed model did not show any decrease in fit compared to our full structural model $\Delta\chi^2$ (16) = 14.46, p = .564. Alternative Model 1 reversed the positions of Bonds and WB, whereas Alternative Model 2 reversed the positions of Bonds and Meetings. Given the models are not nested, we used the Akaike Information Criterion [AIC] to compare the fit of these models, with smaller AICs indicating better fit (Kline, 2005). Both alternative models showed poorer model fit than our structural model supporting our causal sequence over these alternatives; Structural Model AIC = 13,077.69; Alternative Model 1 = 13,108.88; Alternative Model 2 = 13,128.17.

Notes

3.1. Attrition analyses are reported in the Supplemental Materials.

3.2. None of the substantive variables overlap with those reported in Easterbrook and Vignoles (2012a).

3.3. Initial analyses and further considerations regarding the multilevel structure of our data are reported in the Supplemental Materials.

3.4. We report our analyses of two alternative models in the Supplemental Materials, which show that our hypothesised model is preferred.

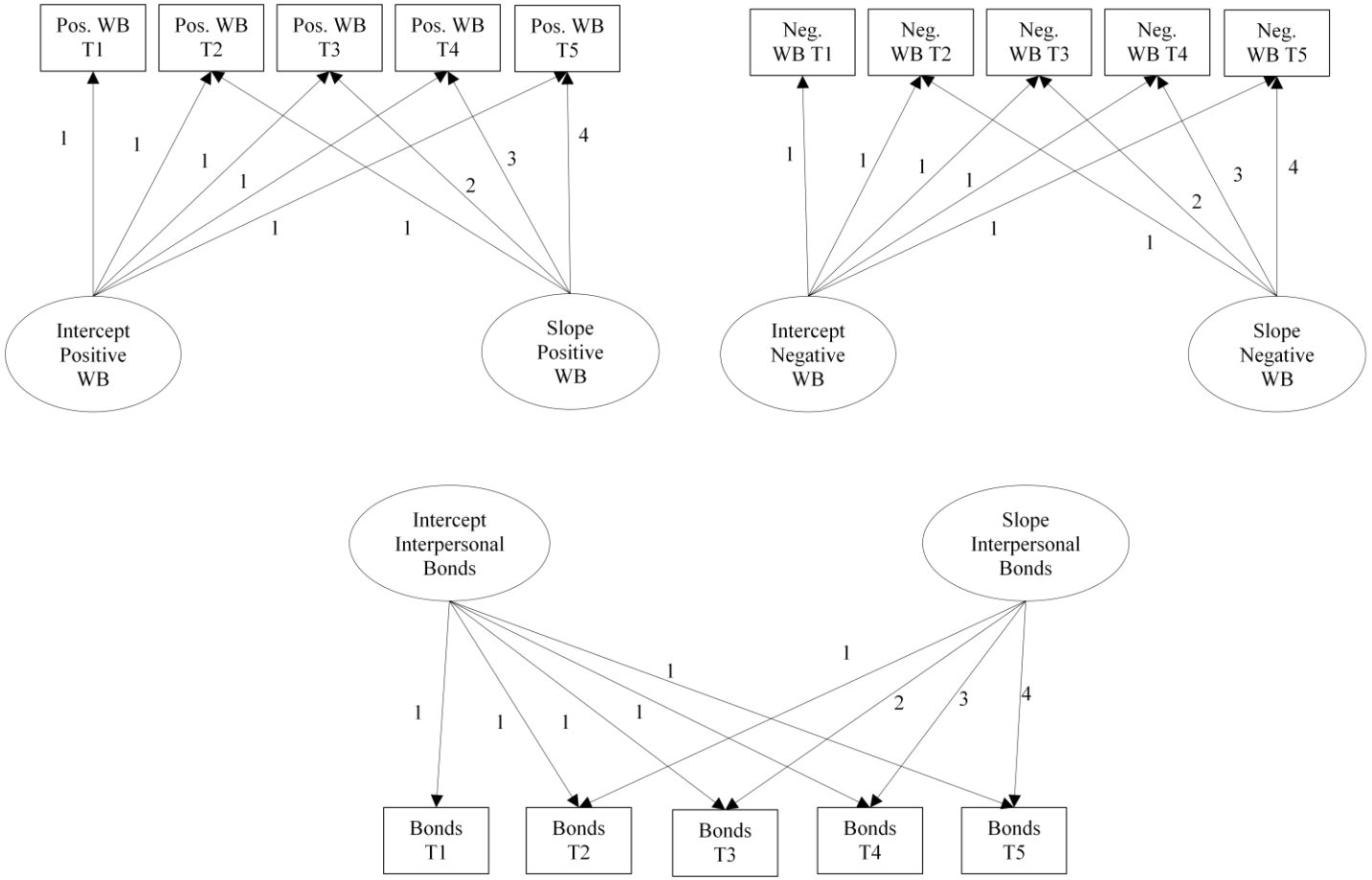
3.5. We also analysed a model testing for an interaction between Common Room and Ensuite on Coincidental Meetings. The interaction was non-significant and we therefore report the more parsimonious model without the interaction.

3.6. Aside from these effects, we also controlled for the respondents' age and gender by regressing all variables on age and gender. The only significant effects indicated that females had a steeper Positive WB slope than males (B = 0.06, p = .036), and age negatively predicted Coincidental Meetings (B = -0.05, p = .005).

Table 3.3: Parameter and variance estimates for the growth curves in the growth model.

	Grand mean			Variance at individual-level			Variance at flat-level		
	B	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Interpersonal Bonds									
Intercept	5.96	0.11	<.001	3.11	0.36	<.001	0.84	0.34	.014
Slope	0.01	0.04	.740	0.11	0.03	<.001	0.06	0.03	.075
Positive WB									
Intercept	4.49	0.06	<.001	0.69	0.12	<.001	0.12	0.10	.222
Slope	-0.12	0.03	<.001	0.03	0.02	.160	0.02	0.20	.247
Negative WB									
Intercept	2.37	0.06	<.001	0.51	0.11	<.001	0.22	0.11	.058
Slope	0.03	0.02	.265	0.03	0.02	.150	0.00	0.03	.951

Figure 3.2: Growth model showing the unstandardised estimates for the growth curves of Positive Well-Being, Negative Well-Being, and Interpersonal Bonds. Note that the covariances between the intercepts and the covariances between the slopes are omitted for clarity.



PAPER 4: Urbanisation, Culture, and the Distinctiveness Motive

Matt Easterbrook, Vivian L. Vignoles, Maja Becker, Ellinor Owe, Rupert Brown, and Peter Smith
University of Sussex

David Bourguignon
Paul Verlaine University

Ana Torres and Leoncio Camino
Federal University of Paraiba

Jas Laile Jaafar
University of Malaya

Flávia Cristina Silveira Lemos
Federal University of Pará

Girishwar Misra and Preeti Kapur
University of Delhi

M. Cristina Ferreira
Salgado de Oliveira University

Silvia H. Koller
Federal University of Rio Grande do Sul

Martina Zinkeng
University of Buea

Roberto Gonzalez, Nicolas Didier, Diego Carrasco, and Siugmin Lay
Pontificia Universidad Catolica de Chile

Michael H. Bond
Polytechnic University of Hong Kong

Zhang Jianxin and Shaobo Lv
Chinese Academy of Sciences

Boris Cendales Ayala
Universidad de Los Andes

Sami Abuhamdeh
Istanbul Şehir University, Turkey

Baland Jalal
The American University in Cairo

Phatthanakit Chobthamkit and Xiao Zhang
University of Sussex

Kassahun Habtamu Mekonnen
University of Addis Ababa

George Nizharadze
Free University of Tbilisi

Immo Fritsche and Bettina Möller
University of Leipzig & Friedrich-Schiller-Universität Jena

Benjamin Amponsah
University of Ghana

Márta Fülöp
Hungarian Academy of Sciences

Ragna B. Garðarsdóttir
University of Iceland

Camillo Regalia, Claudia Manzi and Maria Brambilla
Universita Cattolica del Sacro Cuore

Masaki Yuki
Hokkaido University

Charles Harb
American University of Beirut

Ginette Herman and Marie Courtois
Catholic University of Louvain-la-Neuve

Johanna H. Buitendach
University of KwaZulu Natal, South Africa

Mariana Martin
University of Namibia

Said Aldhafri
Sultan Qaboos University

Ronald Fischer and Taciano L. Milfont
Victoria University of Wellington

Andrew Mogaji
Benue State University

Nicolay Gausel
University College Østfold

Agustín Espinosa

Pontificia Universidad Católica del Perú

Ma. Elizabeth J. Macapagal
Ateneo de Manila University

Alin Gavreliuc
West University of Timisoara

Alexander Tatarko
High School of Economics, Moscow

Robert Kreuzbauer
Nanyang Technological University

Inge Schweiger Gallo
Universidad Complutense de Madrid

Paula Prieto Gil, Raquel Lorente Clemares, and Gabriella Campara
Universidad Complutense de Madrid

Ersin Kusdil and Selinay Çaglar
Uludag University

Peter Baguma
Makerere University

Mirona Gheorghiu
Queen's University Belfast

Robert Kreuzbauer
Nanyang Technological University, Singapore

Seth J. Schwartz, Juan A. Villamar and Sabrina E. Des Rosiers
University of Miami

Monika Hudson
University of San Francisco

Anthony D. Greene
University of North Carolina-Charlotte

Michelle K. Williams
University of Connecticut

Tom Pyszczynski and Pelin Kesebir
University of Colorado at Colorado Springs

Author Note: The authors would like to thank Juliana Alvarez Hernandez and Ashwitha Suresh-Uchil for their data coding.

Reference:

Easterbrook, M., Vignoles, V. L., Becker, M., Owe, E., Brown, R., Smith, P. B., … & Kesebir, P. (2012). Urbanisation, culture, and the distinctiveness motive. *Unpublished manuscript.*

Abstract

Recent research has shown that the motive to achieve a distinctive identity can be understood as a culturally flexible universal; a universal motive that can be satisfied in culturally specific ways. However, little is known about how the level of urbanisation in an individual's surrounding context may influence distinctiveness seeking. In line with our hypotheses, multilevel analyses using data from 5,043 adults from 169 locations across 33 nations showed that the distinctiveness motive was stronger within more urbanised locations, in line with our hypotheses. Our results also showed that the distinctiveness motive was slightly stronger for people within collectivistic locations, replicating Becker and colleagues' (2012a) recent findings with a larger and more diverse sample. Furthermore, we found that the relative importance of three sources of distinctiveness—social position, difference, and separateness—differed according to a range of individual and contextual factors. Our results confirm that feelings of distinctiveness can be gained in different ways, and highlight the importance of measuring multiple facets of an individual's surrounding context when studying identity processes.

Introduction

People are known to be motivated to see themselves as distinct from other people (Becker et al., 2012a; Vignoles, 2009). In what was the first large scale cross-cultural investigation of the motive for distinctiveness, Becker and colleagues recently found that people from a diverse range of cultures were motivated by a desire to see themselves as distinct from others, but that the way people constructed feelings of distinctiveness varied meaningfully with the dominant beliefs and values within the surrounding cultural context. This was taken in support of the idea that the distinctiveness motive is a *culturally flexible universal:* a universal motivation that can be satisfied in culturally attuned ways.

In this article, we argue that the level of urbanisation within an individual's local context is an important factor that can influence the motive for distinctiveness. Indeed, as we review below, theorists have argued that changes in local urbanisation levels can modify how people interact and connect with each other (Durkheim, 1893/1964; C. S. Fischer, 1973; Simmel, 1903/1957; Tönnies, 1887/1957), which we argue has consequences for how people distinguish themselves from others. We therefore build upon Becker and colleagues' (2012a) recent advance by proposing that local urbanisation influences both the strength of the distinctiveness motive and

how feelings of distinctiveness are constructed. We go on to test these novel hypotheses using multilevel regression analyses on a large cross-cultural dataset, while simultaneously addressing some of the limitations of Becker and colleagues' study.

The Distinctiveness Motive

It has long been argued within social psychology that people are motivated to construct identities that distinguish them from others. Indeed, a motive for distinctiveness is incorporated into many psychological theories (e.g. Brewer, 1991; Snyder & Fromkin, 1980; Tajfel & Turner, 1979), and a wealth of empirical evidence supports the presence of a motive for distinctiveness. For example, researchers have found that people are more likely to remember self-relevant information if it distinguishes them from others (Leyens, Yzerbyt, & Rogier, 1997) and are more likely to describe themselves in terms of their more distinctive attributes (McGuire & Padawer-Singer, 1976). When people's sense of distinctiveness comes under threat, they report more negative emotions (Fromkin, 1972), evaluate rare and novel experiences more favourably (Fromkin, 1970), and are faster to recognise uniqueness-related words as self-descriptive (Markus & Kunda, 1986). What's more, people are more likely to identify with groups that provide them with a sense of distinctiveness (Brewer, 2001; Easterbrook & Vignoles, 2012a), and strive to enhance or maintain the distinctiveness of their group's identity in a number of ways (Jetten, Spears, & Postmes, 2004; Jetten, Summerville, Hornsey, & Mewse, 2005; van Rijswijk, Haslam, & Ellemers, 2006). Moreover, threats to both individual and group distinctiveness have been shown to lead to negative emotions and strivings to regain distinctiveness (e.g. Fromkin, 1970; Pickett & Brewer, 2001; Pickett, Silver, & Brewer, 2002, for reviews, see Becker et al., 2012a; Lynn & Snyder, 2002; Vignoles, 2009).

Motivated identity construction theory (Vignoles, 2011) conceptualises the motive for distinctiveness as an *identity motive*; a psychological disposition pushing people towards constructing certain identities and away from others. Throughout a series of studies, Vignoles and colleagues have shown that the more distinctive parts of people's identities are perceived as especially central to their self-definitions (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006), and are affectively evaluated more positively (Becker et al., 2012a). Furthermore, evidence for the distinctiveness motive has been found across a diverse range of cultures (Becker et al., 2012a), and

at the individual, relational, and collective levels of self-representation (Easterbrook & Vignoles, 2012a; Vignoles et al., 2006, Study 2). Vignoles and colleagues (Vignoles et al., 2006, Study 4) also found that people's ratings of the distinctiveness of multiple identity aspects prospectively predicted the perceived centrality of identity aspects to their self-definitions two months later, whereas the reverse effect was not found.

Vignoles and colleagues (Becker et al., 2012a; Vignoles, 2009; Vignoles, Chryssochoou, & Breakwell, 2000, 2002) have also investigated the *ways* that people distinguish themselves from others, proposing and providing evidence for three *sources of distinctiveness*. Vignoles and colleagues found that people can construct a sense of distinctiveness by incorporating aspects into their identities that give them a sense that they are (a) *different* from others in terms of their personal qualities and characteristics, (b) *separate,* distant, or bounded from others, and/or (c) associated with particular *social positions*, including friendship and family ties, roles, and social statuses (see Figure 4.1). These three sources of distinctiveness have been validated through research with Anglican parish priests (Vignoles et al., 2002), and across a large cross-cultural study using data from over 4,500 students across 21 cultural groups (Becker et al., 2012a). As we review below, these three sources of distinctiveness provide the foundation for construing the distinctiveness motive as a *culturally flexible universal* (Becker et al., 2012a; Vignoles, 2009, 2011): a universal motivation that guides psychological processes across cultures, but which can be satisfied in different, culturally attuned ways.

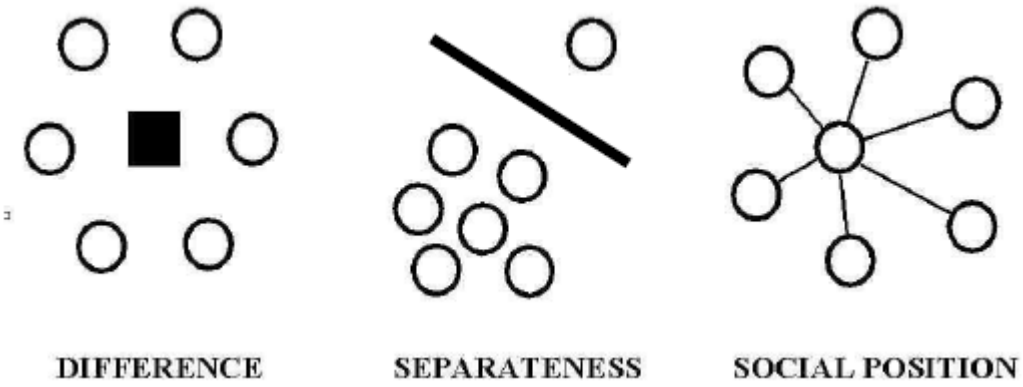


Figure 4.2: Source of distinctiveness. Adapted from Vignoles et al., 2002.

The Distinctiveness Motive and Culture

Until recently, the vast majority of research regarding the distinctiveness motive had been conducted in Western, individualistic cultures. Without evidence for such a motive in collectivistic cultures, arguments arose suggesting that the motive was stronger in, or even specific to, individualistic cultures (e.g. Breakwell, 1987; Markus & Kitayama, 1991; Triandis, 1995). Implicit within these arguments is an underlying assumption that identity motives are internalisations of the priorities prevalent in an individual's surrounding cultural context. This did not go unchallenged, however, and others argued that the distinctiveness motive is a universal human motivation (e.g. Brewer, 1991) applicable to individuals within all cultures. Brewer and Roccas (2001) even suggested that the distinctiveness motive would be stronger in more collectivistic cultures, since the motive would be more frustrated, and therefore aroused, in contexts were distinctiveness was not valued or was even discouraged (see also Lo, Helwig, Chen, Ohashi, & Cheng, 2011).

Vignoles and colleagues (Becker et al., 2012a; Vignoles, 2009; Vignoles et al., 2000) proposed a middle ground between these perspectives. They argued that a sense of distinctiveness was a necessary precondition for a meaningful identity, and would therefore influence identity processes within all cultures. However, they argued that different cultures would provide their members with, or put emphasis on, different ways of constructing feelings of distinctiveness. In particular, they predicted that individuals within individualistic cultures would achieve feelings of distinctiveness relatively more through difference and separateness, reflecting the cultural emphasis on uniqueness, difference, privacy, and independence. In contrast, they argued individuals within collectivistic cultures would achieve feelings of

distinctiveness relatively more through their social positions, reflecting the cultural priorities of group belonging, tradition, duty, conformity, and connectedness.

In the first large cross-cultural study investigating the distinctiveness motive, Becker and colleagues (2012a) tested Vignoles' (2009; Vignoles et al., 2000) predictions using data from 4,751 participants from 21 cultural groups. In support of the existence of the distinctiveness motive, Becker and colleagues found that participants' perceived as more central to their self-definitions and affectively evaluated more positively aspects of their identities that provided them with greater feelings of distinctiveness. Although they found very little variation in the strength of the motive due to individual differences, the motive was stronger for people within more collectivistic cultures, supporting Brewer and Roccas' (2001) proposal that the motive would become frustrated, and thus more activated, within cultural contexts where distinctiveness is not valued or discouraged. Furthermore, they found that the way people constructed feelings of distinctiveness also varied meaningfully according to the cultural context. Specifically, feelings of distinctiveness were constructed relatively more through difference and separateness in individualistic cultures, but relatively more through social positions within collectivistic cultures. Again, it was the differences in values and beliefs within the cultural climate that an individual was in, rather than any individual differences, that accounted for this variation.

Urbanisation

The level of urbanisation in the surrounding environment is another factor that may influence the way people see themselves, and, in particular, how people distinguish themselves from others. Urban theory proposes that a change from rural to urban living modifies the ways that people interact with each other, and changes the meanings and patterns of interpersonal connections (Durkheim, 1893/1964; C. S. Fischer, 1973; Wirth, 1938). This, in turn, influences how people define themselves (Baumeister, 1986; Kashima et al., 2004).

The small size of rural communities, for example, means that residents within a village are likely to know each other personally, making them recognisably accountable for their actions. This creates strong pressures to conform, and discourages displays of personal uniqueness (Baumeister, 1986; Durkheim, 1893/1964; Tönnies, 1887/1957), as contemporary evidence has shown (Yamagishi, Hashimoto, Li, & Schug, 2012). Furthermore, low levels of residential and social

mobility (Sassen, 1998) mean that families tend to stay together and become associated with particular occupations, social ties, and social statuses within the community that are often passed down through the generations (Baumeister, 1986). Such stability and long lasting social ties create a strong sense of duty towards the community and this fosters a strong collective focus (Durkheim, 1893/1964; Tönnies, 1887/1957). The result of these social conditions is that people are likely to be defined by the social positions they occupy within the community (Baumeister, 1986; Kashima et al., 2004). Moreover, as these identities are often ascribed to people from birth, it is unnecessary for people to strive to distinguish themselves through difference or separateness, which, in any case, may be discouraged in such communities (see also Vignoles, 2009). Thus, we expect that, within rural areas, feelings of distinctiveness will be gained passively through the salience of people's *social positions*.

The social conditions characterised by urban living, however, change the meaning and patterns of these interpersonal connections, and decrease the salience of social positions. For example, higher residential and social mobility within urban areas (Sassen, 1998), along with the reduced importance of the family (Baumeister, 1986), weakens conformist pressures and erodes the connections between people (Durkheim, 1893/1964; Wirth, 1938). This, in turn, decreases the visibility and thus accountability of individuals, making personal displays of uniqueness more acceptable in urban areas (Yamagishi et al., 2012), but also increasing feelings of anonymity, separation, and alienation (C. S. Fischer, 1973; Simmel, 1903/1957). Occupations undergo a similar shift in meaning, not only losing their associations with specific families, but also their individuating nature as the demands of a dense urban population require several people to occupy each role (Baumeister, 1986; Durkheim, 1893/1964). People are no longer provided with distinguishing social positions, and are faced with the task of filling up their now "empty selves" (Cushman, 1990) in ways that distinguish them from others (Baumeister, 1986), necessitating a more individual focus (Wirth, 1938). In more urban areas, therefore, we expect feelings of distinctiveness to be gained less from the social positions people associate themselves with, and more through self-definitions that distinguish them as being different or separate from others. Moreover, as distinctiveness is no longer passively achieved through inherited social positions and people have to strive

actively to distinguish themselves (Cushman, 1990), we expect this to be manifested in a stronger distinctiveness motive among those living in more urban areas.

One study that directly investigates the effects of urbanisation on distinctiveness-seeking was recently conducted by Yamagishi and colleagues (2012). They found that Japanese rural dwellers were less willing to choose a unique pen than urbanites, but only when they were socially accountable for their choice. When participants were socially unaccountable, rural and urban residents both chose the unique pen at similar frequencies. Yamagishi and colleagues argued that rural dwellers were less likely to choose the unique pen when socially accountable because the high conformity pressures that they face within rural communities make them uncomfortable publically displaying their distinctiveness. Urban life, however, sets people free from the constraints of rural living, allowing urbanites to make public displays of uniqueness without fear of community ridicule or disapproval. While these results do indeed suggest that rural dwellers are less willing to make unique public displays than urban dwellers, Yamagishi and colleagues' study did not provide participants with any way of expressing distinctiveness *except through difference*. Thus, while rural dwellers may not show as much willingness as urbanites to express difference, this does not necessarily imply that their distinctiveness motive is frustrated, as Yamagishi and colleagues suggest. Instead, it may be that rural dwellers construct feelings of distinctiveness through other ways, such as through their social positions, as we argued above. Yamahishi and colleagues' results, therefore, do not contradict our reasoning. We aim to extend their findings using a less restrictive methodology that incorporates multiple sources of distinctiveness, and goes beyond within-nation comparisons by using data from a diverse range of cultures and locations.

Urbanisation and Individualism-Collectivism

Individualism-Collectivism is often taken by researchers to be symptomatic of the level of urbanisation within a society, with urbanisation often seen as a precursor to individualism (Wirth, 1938). Indeed, the above review highlights how a transition from rural to urban life is associated with a change in focus from the collective to the individual. Although most urban theory is rooted in individualist, western nations, it has been corroborated across a diverse range of cultures through several studies that have found that people living within more urban areas are often more individualistic than those living in rural areas (e.g. Cha, 1994; Freeman, 1997;

Georgas, 1989; Ma & Schoeneman, 1997; Mishra, 1994; but see Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006; Vandello & Cohen, 1999). However, Individualism-Collectivism [I-C] and urbanisation are not one and the same thing. Culture is complex, multifaceted, and rooted in many things that are seemingly unrelated to the development of urban infrastructure, such as religion (Huntington, 1996), climate (Van de Vliert, Schwartz, Huismans, Hofstede, & Daan, 1999), and philosophical legacy (e.g. King & Bond, 1985). To take a more concrete example, Singapore is one of the most urbanised nations in the world with 100% of its population living in urban areas (Population Reference Bureau, 2011), but it is often taken as an example of a collectivistic culture.

Supporting our contention that urbanisation and I-C are different factors that should be disentangled, Kashima and colleagues (2004) found that national differences between Japan, conceptualised as a traditionally collectivistic nation, and Australia, an individualistic nation, accounted for differences in the emphasis on the individual self, whereas within-nation differences between highly urban metropolitan areas and less urbanised regional cities accounted for differences in the emphasis on the collective self, with a more urbanised context associated with a de-emphasis on the collective self. Thus, within Kashima and colleagues' study, national culture and the level of urbanisation within one's local context were associated with variation in different aspects of the self. Although Kashima et al.'s findings do suggest that urbanisation may have separate effects from I-C, their results were based upon comparisons between two nations, each with two within-nation locations, and they did not directly measure the claimed differences in I-C. Thus, the differences between residents of metropolitan and regional cities could be due either to the effects of differing urbanisation levels between the locations, or due to greater individualism within the more urban areas. We attempt to disentangle these factors, measuring both I-C and urbanisation within the local context.

The Current Study

The current study investigates the distinctiveness motive with three main aims in mind: to address some of the limitations of Becker and colleagues (2012a) study, to test our predictions regarding the effect of local urbanisation, and to disentangle the effects of I-C and urbanisation.

Although Becker and colleagues (2012a) were the first to study distinctiveness using a large and diverse cultural sample, there were some limitations

that we aim to address in our study. Becker et al. collected data from 4,751 high-school students across 21 cultural groups from 19 nations. This limits the applicability of their findings to people other than adolescent high-school students. This may be particularly relevant for studies investigating individualism and distinctiveness, which have been argued to decrease over the life span and be particularly strong during adolescence (e.g. Mishra, 1994; Triandis, 1995). We therefore sampled only adult respondents over 18 years of age who were not in full-time education, allowing us to investigate if Vignoles' (2009; Vignoles et al., 2000) predictions apply not just to young adolescents but to adults as well. Furthermore, we collected data from a total of 36 nations, and strove to collect the most diverse samples we could within each nation. We therefore tested the applicability of the distinctiveness motive to identity processes across a much larger and diverse sample of cultures and people than any previous study to date.

Becker and colleagues (2012a) measured the strength of the distinctiveness motive by assessing whether the distinctiveness ratings of identity aspects predicted the perceived centrality of those identity aspects to respondents' self-definitions, as well as the positive affect that was associated with each identity element. Identity motives have also been tied to the behavioural enactments of identity aspects (Vignoles et al., 2006), and distinctiveness strivings have been shown to influence outward behaviours (see Vignoles, 2009). Hence, we make an important advance over Becker et al.'s study by investigating not only if the distinctiveness ratings for identity aspects predict their ratings for perceived centrality and positive affect, but also if they predict how much each identity aspect is behaviourally enacted.

Becker and colleagues (2012a) found that it was the differences *between cultures* in the prevalent values and beliefs, rather than any differences between individuals, that accounted for the variations in the way distinctiveness was constructed. However, researchers have questioned the common assumption that nations represent cultural units (Baskerville, 2003; House & Javidan, 2004; Tung, 2007; but see Minkov & Hofstede, 2012), and many studies have found within-nation differences on many cultural phenomena (e.g. Debies-Carl & Huggins, 2009; Kashima et al., 2004). Furthermore, research has shown that cultural stereotypes are transmitted and maintained through interaction and communication patterns (Kashima, 2000), suggesting that cultural influence may be transmitted not only through nation-level processes but also within a local context where individuals

interact and thus enact and transmit cultural norms. Indeed, recent evidence by Plaut, Markus, Treadway, & Fu (2012) found that there were important differences between two cities within the US regarding social norms, cultural products, and dominant discourses, and that this was reflected in residents' self concepts, suggesting that the local context may be an important source of variation to residents' self concepts.

We therefore build upon Becker and colleagues' (2012a) study by measuring and including predictors at the local-level, as well as the individual-level. This allows us to investigate the effect of the local cultural context on the distinctiveness motive, studying culture at a more fine-grained level than most previous studies. Furthermore, we have argued that the effects of urbanisation are due to the changing patterns and meanings of interactions between people, and this approach enables us to measure urbanisation at the appropriate local level, by asking residents to indicate the type of settlement they believe they live in: Village/rural area, town, or large city. By measuring I-C at the location-level, we can investigate if it is the I-C orientation within a particular locale, or its level of urbanisation, that can explain any effects we may find.

Smith (2006) has suggested that, when analysing models that include I-C, it is important to include measures of wealth in order to disentangle the effects of these two closely related variables. Becker and colleagues (2012a) followed this advice and extrapolated it to the individual-level of analysis, including an individual-level measure of subjective wealth in addition to nation-level Gross National Index[GNI]. They found that the motive for distinctiveness was stronger for respondents from poorer nations when predicting the positive affect associated with identity aspects, but not when predicting the perceived centrality of those aspects. They also found that difference and separateness tended to be more important for feelings of general distinctiveness as wealth increased. We also follow and extrapolate Smith's advice, including measures of national GNI, individual subjective wealth, and the aggregate of this at the local-level of analysis. While we expected the effects of wealth measures to follow the same trend as found by Becker and colleagues, we focused mainly upon our more theoretically central variables and included wealth mainly as a control variable.

In a similar vein to GNI, we also controlled for the length of time respondents had lived in the same location. Residential mobility differs between rural and urban

areas (Sassen, 1998), and has been shown to account for differences found between rural and urban respondents (e.g. Kasarda & Janowitz, 1974). Thus, we asked respondents to report how long they had lived in their location and included this as a control variable at the individual- and local-levels of analyses. This enables us to gain a greater understanding of the effects of urbanisation and I-C by further disentangling them from possible confounds. Again, we do not make any specific predictions regarding length of residence, focusing on the more theoretically important variables and including it mainly as a control variable.

To summarise, research suggests that people may perceive as more self-defining, affectively evaluate more positively, and behaviourally enact more frequently aspects of their identity that give them greater feelings of distinctiveness. Hence, in line with past research (e.g. Becker, et al., 2012a; Vignoles et al., 2006), we measure the strength of the distinctiveness motive by analysing the within-person relationship between participants' distinctiveness ratings of their identity aspects and the three different outcomes: the perceived centrality of identity aspects, the positive affect associated with identity aspects, and the amount each identity aspect is behaviourally enacted. Stronger motives for distinctiveness are indicated by more positive within-person relationships between distinctive ratings and these three outcomes. We therefore investigate the strength of the distinctiveness motive in three separate models, one predicting each of the identity outcomes: centrality, affect, and enactment (denoted as H#a, H#b, and H#c below). Our use of these within-person measures also protect our results from some problems that are often encountered within cross-cultural research; those of acquiescence response bias (Smith, 2004) and the reference group effect (Heine, Lehman, Peng, & Greenholtz, 2002), (see Becker et al. 2012a for more details of this indirect measure). We also have predictors at four levels of analyses—within-individual, individual, local, and national—although we do not make predictions regarding at which level effects will occur, preferring instead to treat this as exploratory given the novelty of including predictors at the within-individual-, individual-, local-, and national-levels of analyses.

We predict that the distinctiveness motive will be stronger for people who live in more urbanised areas (H1a; H1b; H1c), with the motive being weakest for respondents who live in villages, stronger for those who live in Towns, and strongest for people who live in cities. We expect, however, that the strength of the motive

will increase slightly as collectivism increases, in line with Becker and colleagues' (2012a) results (H2a; H2b; H2c). We also predict that the way feelings of distinctiveness are constructed will differ according to I-C and urbanisation. Specifically, we predict that social position will be relatively more important for feelings of general distinctiveness for individuals who live in less urbanised locations (H4), being most important for those who live in villages, and least important for those who live in cities. We expect difference to be relatively more important for feelings of distinctiveness for people who live within more urban areas (H5), being most important for those living in cities, and least important for those living in villages. We also expect separateness to be relatively more important for feelings of distinctiveness for people who live within more urban areas (H6), being most important for those living in cities, and least important for those living in villages. We also expect to replicate Becker and colleagues' findings that social position will be relatively more important for feelings of general distinctiveness for individuals within collectivistic contexts (H7), whereas within individualistic contexts, difference (H8) and separateness (H9) will be relatively more important.

Method

Respondents and Procedure

We used a variety of methods to recruit opportunistic samples of adult respondents, including snowballing through researchers' social networks, distributing the questionnaires through students' families and friends, and approaching community groups and organisations. We also targeted diverse groups within each nation to achieve a heterogeneous sample. A total of 7,882 adult respondents across 36 nations completed the questionnaire, with national sample sizes ranging from 62 (Japan) to 519 (India). The age of respondents ranged from 18-91 years old (M = 35, SD = 13), and 56% of the participants were female. National sample sizes and descriptive statistics for the final sample used in analyses are shown in Table 4.1.

Table 4.1: Descriptive statistics for each nation, based on the final sample. Continued…

Country	*N*	% Female	*M* Age	*M* I-C	*M* Length of Residence	*M* Wealth	GNI per capita/$ millions	*N* City	*N* Town	*N* Village
Belgium	173	51.26	32.55	0.55	17.75	3.66	45310	22	119	32
Brazil	381	58.38	33.66	0.13	20.02	3.51	8040	376	5	0
China	198	69.83	31.31	-0.45	16.56	3.64	3590	198	0	0
Colombia	160	61.04	39.67	0.39	25	4.28	4930	138	22	0
Egypt	99	57.45	30.8	-0.31	14.51	4.04	2070	99	0	0
Ethiopia	217	41.42	33.99	-0.53	23.53	3.45	330	125	0	92
Georgia	179	55.75	41.6	-0.54	30.11	3.92	2530	173	6	0
Germany	89	61.72	38.19	0.22	22.88	4.3	42560	58	31	0
Ghana	53	18.87	27.28	-0.06	17.53	5	700	44	9	0
Hungary	153	44.61	35.73	0.17	27.12	3.69	12980	106	35	12
Iceland	95	67.2	34.22	0.35	19.84	4.19	43220	64	31	0
India	440	41.8	35.33	-0.33	26.84	4.38	1180	361	79	0
Italy	88	68.05	40.93	-0.22	36.26	4.27	35080	55	33	0
Japan	48	60.31	48.35	0.29	19.94	4.1	37870	48	0	0
Lebanon	163	49.76	33.4	0.07	24.63	4.11	7970	163	0	0
Malaysia	79	63.02	28.66	-0.37	16.36	3.67	7230	79	0	0
Namibia	128	62.33	25.14	0.4	12.9	2.9	4290	123	5	0
New Zealand	144	47.36	36.19	0.35	13.21	4.43	26830	144	0	0
Norway	19	62.42	29.1	0.37	11.33	4.48	86440	19	0	0
Philippines	147	53.93	28.48	-0.41	17.06	3.51	1790	142	5	0
Romania	270	56.8	34.59	0.03	25.82	4.19	8330	219	30	21
Russia	129	82.59	29.52	0.11	20.01	4.08	9370	67	47	15

Table 4.1: …continued

Singapore	93	55.09	32.95	-0.12	19.49	4.23	37220	93	0	0
South Africa	421	62.23	30.3	0.14	23.68	4.53	5770	416	5	0
Spain	108	55.7	41.44	0.13	33.83	4.08	31870	65	16	27
Sweden	59	63.7	42.88	0.44	26.82	4.41	48930	50	9	0
Turkey	215	60.94	39.84	-0.26	25.88	4.07	8730	215	0	0
Uganda	274	54.27	35.54	-0.2	23.87	3.97	460	160	114	0
U.K.	97	67.01	46.8	0.18	22.79	3.93	41520	50	20	20
U.S.	112	62.47	28.76	0.45	14.16	3.96	47240	107	5	0
Peru	62	63.01	41.39	-0.05	33.79	2.9	4150	0	0	62
Thailand	58	70.56	28.05	-0.05	18.32	4.09	3760	53	5	0
Cameroon	92	67.48	26.24	-0.19	16.94	3.88	1170	0	62	30
Total	5043	58.13	34.63	0.02	21.78	4	18892.73	4032	693	311
Village/Rural areas	311	53.4	37.25	-0.09	29.39	3.46				
Towns	693	55.2	35.74	0.06	24.32	3.93				
Cities	4032	57.24	33.95	-0.03	21.72	4.04				

Measures

The measures were included within a larger questionnaire regarding identity construction and culture (see Owe, Vignoles, Becker, Brown, et al., 2012; Owe, Vignoles, Becker, Smith, et al., 2012) The questionnaires were independently translated and back-translated into the main language of each country by bilinguals who were unfamiliar with the research topic and hypotheses (Brislin, 1970), with any inconsistencies or ambiguities resolved through discussion. The respondents were told that the questionnaire formed part of a university project on beliefs, thoughts, and feelings, but were not informed about the specific aims of the study or its cross-cultural nature.

Identity Aspects. The questionnaire began with an adapted paper version of the Identity Motives Questionnaire (Vignoles et al., 2006, see Becker et al., 2012a, for a detailed description of this version). Respondents were first asked to generate freely eight answers to the question "Who are you?", which hereafter we refer to as identity aspects. This page of the questionnaire folded out to the side of the main questionnaire booklet so that respondents' identity aspects could be seen as they completed the remainder of the questionnaire, with the response scales for the items relating to these identity aspects aligned so that each identity aspect had its own response scale next to it.

Rating of identity aspects. Respondents were then asked to rate each of their identity aspects on several dimensions, each of which was printed at the top of a separate sheet in the questionnaire with a block of eight, 11-point rating scales underneath, one for each identity aspect. The first few pages asked respondents to rate their identity aspects for how central they were to their self-definition ("How important is each of these things in defining who you are?"; anchors 0 = *not at all important,* 10 = *extremely important*); the affect associated with each aspect ("How happy or unhappy do you feel about each of these things?"; anchors 0 = *Extremely unhappy,* 10 = e*xtremely happy*); and how much each aspect was enacted ("How much do you show people that you are each of these things in your everyday actions?" anchors 0 = *Don't show this at all*, 10 = *very definitely show this*). Interspersed among the remaining items were items assessing the extent that each identity aspect was associated with feelings of *General Distinctiveness* ("How much do you feel that each of these things distinguishes you—in any sense—from other

people?" anchors for this item and the sources of distinctiveness items were 0 = *Not at all,* 10 = *extremely*); with a distinctive *Social Positions* ("How much does each of these things give you a particular role or position in relation to others?"), with a sense of *Difference* ("How much does each of these things make you different from others in your personal characteristics?"), and with a sense of *Separateness* from others ("How much does each of these things create any sort of boundary between yourself and others?").

Individualism-Collectivism [I-C]. We followed Brewer and Chen's (2007) theoretical framework proposing that culture includes components relating to self-representations (or construals), beliefs, and values by constructing a new, broad measure of I-C. To do this, we used items from three separate scales that were included within our questionnaire, reflecting each of the three dimensions outlined by Brewer and Chen.

We used a short version of the Portrait Value Questionnaire (Schwartz, 2007) to tap into the value dimension of I-C. The scale includes 21 gender-matched items that are presented as short descriptions of a person, and respondents are then asked to indicate how much each description is or is not like them. The 6-point response scale ranges from *very much like me* to *not at all like me*; however, we reversed coded all items so that higher scores indicate a greater endorsement of the value portrayed in the description. To compute our I-C measure, we used ten items tapping into the nation-level value dimension of autonomy versus embeddedness (R. Fischer, 2011; Schwartz, 2007), the procedure for which is described below. Sample items were "He/she looks for adventures and likes to take risks. He/she wants to have an exciting life" and "Tradition is important to him/her. He/she tries to follow the customs handed down by his/her religion or his/her family" (reversed).

We used Owe and colleagues (Owe, Vignoles, Becker, Brown, et al., 2012) contextualism scale to tap into the belief dimension of I-C. This six-item scale consists of an equal number of positively and negatively worded items, and assesses the importance of social and contextual attributes in defining who people are, which has been shown to be a component of collectivism (versus individualism). The 6-point scale ranges from *completely disagree* to *completely agree*. Sample items were "To understand a person well, it is essential to know about the place he/she comes from" and "One can understand a person well without knowing about his/her social position" (reversed).

We used items from Owe and colleagues' (2012) self-construal scale to tap into the self-construal dimension of I-C. This scale was developed in conjunction with a new theory of self-construals and was designed to assess how people construe the self and its relationships to others. The scale contains 21 statements, rated on a 9-point response scale. At the top of the page respondents were asked "How well does each of these statements describe you?" (scale anchors were *Not at all* to *Exactly*). We used 9 items that tap into the three lower-order dimensions of uniqueness versus similarity, self-expression versus harmony, and self-direction versus reception to influence. At the cultural level of analysis, these three dimensions make up the higher order dimension of self-differentiation (defined as an emphasis on a desire to be different and stand out over conforming and fitting in), which has been shown to be associated with nation-level I-C. Sample items were "You follow your personal goals even if they are very different from the goals of your family." (self-direction); "You try to avoid being noticeably different from others." *Reversed* (uniqueness); and "You show your inner feelings even if it disturbs the harmony in your family." (harmony, dimension was reversed).

In creating the I-C measure, we controlled for individual response bias using a method that avoids some of the statistical problems associated with alternative techniques such as ipsatizing (R. Fischer, 2004). To do this, we first created an indicator of individual response bias within each of the three scales—HVS, Contexualism, and Self-construal—by taking the mean of a pool of items that we were not using to construct the I-C measure. In making these item pools, we carefully chose pairs of items that were conceptually opposed to each other so that the mean of these pools represented individual response bias rather than any theoretical construct. Within each scale, we then subtracted this mean from the raw scores for each item that forms part of our I-C measure. We then took account of the different response scales across the HVS, Contextualism, and Self-Construal measures by dividing each score by its scale maximum. For each individual, we computed the mean of these scores as our individual-level measure of I-C. We also aggregated the scores up to the local-level of analysis before creating our local-level I-C measure by computing their mean.

The new I-C measure showed good reliability at the individual- ($\alpha = .71$), local ($\alpha = .89$), and national-levels ($\alpha = .89$) of analysis. At the national-level of analysis it showed adequate convergence with Hofstede's (1980) historical indices of

individualism-collectivism (r = .47), and good convergence (r = -.71) with the more recent and statistically robust measure of in-group collectivism practices from the GLOBE project (House, Hanges, Javidan, Dorfman, & Gupta, 2004; Javidan, House, Dorfman, Hanges, & de Luque, 2006).

Higher I-C scores on our I-C measure reflect greater individualism (versus collectivism), with greater endorsement of autonomy (versus embeddedness) values, de-contextualised (versus contextualised) beliefs about personhood, and unique and self-directed (versus harmonious) construals of the self.

Local context. Towards the end of the questionnaire, respondents were asked to report the type of settlement where they lived, which we used as a proxy measure of urbanisation ("Which one of the following BEST describes the place where you live? *City; Smaller/average town; Village/rural area"*). Within each location, respondents did not always agree about what the settlement they lived in was best classified as (village/town/city). We therefore assigned each location the modal response to the urbanisation item as our local-level measure of urbanisation.

We also asked respondents to indicate the name of the place where they lived, which we used to cluster respondents within locations enabling us to investigate effects at the local level of analyses. Furthermore, this enabled us to investigate urbanisation at the local level of analysis, allowing us to directly test our theoretical perspective at the appropriate level of analysis (city, town, village/rural area). To create the location clusters, we first corrected any misspellings of place names and ensured that each response referred to the city, town, or village/rural area (reflecting the urbanisation item) as a whole, rather than referring to a district, suburb, or borough, updating the responses as appropriate. We then assigned each location a unique code, thus enabling location to be used as a level of analysis in our models.

We also asked respondents how long they had lived in the same place ("For how many years have you lived in this place?"), which we used as a measure of Length of Residence at the individual level, but also aggregated this to the location level to get a contextual estimate of how long the average person within that location had lived there for.

Other measures. Towards the end of the questionnaire we asked the respondents to report their age, gender, nationality, how long they had lived within their current country, and their country of birth. We also asked respondents to rate their family's subjective wealth from seven options ("Compared to other people in

[country], how would you describe your family's level of financial wealth?" *Very poor* through *Average wealth* to *Very rich)*, which we again used at the individual-level and aggregated to the location-level to get a measure of the average subjective wealth of a location. We also include archival measures of national GNI in our analyses (World Bank, 2010).

Statistical Analyses

Our data have a multilevel data structure, with identity aspects as the primary level of analysis at Level 1, nested within individuals at Level 2, locations at Level 3, and nations at Level 4. Hence, we computed multilevel regression models (Hox, 2002) using MLwiN version 2.25 (Rasbash, Browne, Healy, Cameron, & Charlton, 2012) to conduct iterated generalised least squares estimation. As we were interested in modelling local-level variables as true contextual effects rather than simple aggregates of the individual-level effects, we removed all locations that had less than 5 respondents (Firebaugh, 1980; Hofmann & Gavin, 1998). We removed any individuals who were below 18 years old or in full time education to ensure our results were from non-student adults and thus testing the generalisability of Becker and colleagues (2012a) findings to a non-student, adult population. We also removed any respondents who had lived within their current nations for less than 10 years, so that we did not have any recent immigrants within our sample that could influence our results in unknown ways. This left a total of 39,866 identity aspects, nested within 5,043 individuals within 169 locations within 33 nations.[4.1]

At Level 1 we modelled regression equations for within-person variables representing the various ratings of identity aspects. Predictors at this level were all centred around individual means, thus ensuring that the theoretically important within-person effects were not confounded with between-person covariance (Hofmann & Gavin, 1998; Raudenbush, 1989). We modelled regression coefficients for individual-level variables at Level 2 (I-C, Age, Gender, Subjective Wealth, Length of Residence), local-level variables at Level 3 (Urbanisation, I-C, Average Subjective Wealth, Average Length of Residence), and nation-level variables at Level 4 (GNI). We grand mean centred all of the continuous variables at Levels 2, 3, and 4, used a dummy code for gender (female = -1, male = 1), and used dummy variables for urbanisation with Village as the reference category. To improve the interpretability of the regression coefficients, we also divided Age and Length of Residence by 10, and GNI by 10,000. Zero-order correlations, means, and standard

deviations for all variables are shown in Tables 4.2-4.4, and the within-person correlations are shown across the three location types in Table 4.5.

Results

Strength of the Distinctiveness Motive

To test for cultural, local, and individual differences in the strength of the distinctiveness motive, we computed a series of multilevel regression models predicting the Perceived Centrality of identity aspects; the Positive Affect associated with identity aspects; and the Behavioural Enactment of identity aspects.

Step 1. Step 1 included General Distinctiveness ratings as the sole predictor at Level 1. Across the three models, General Distinctiveness positively predicted the Perceived Centrality ($B = .26$, $p < .001$) of identity aspects, the Positive Affect associated with identity aspects ($B = .29$, $p < .001$), and the Behavioural Enactment of identity aspects ($B = .23$, $p < .001$), suggesting that, on average, identity processes were influenced by distinctiveness strivings within our sample.

Steps 2 & 3. Next, we tested cross-level interaction effects across the three models to investigate if the weights of the three outcome variables (Perceived Centrality, Behavioural Enactment, and Positive Affect) on General Distinctiveness ratings were significantly moderated by any individual (Age, Gender, I-C, Length of Residence) and/or local factors (I-C, Average Length of Residence, Urbanisation).[4.2] We followed the standard procedure for multiple regression by including the underlying main effects for these additional variables in our models (Aiken & West, 1991), as well as the theoretically important cross-level interactions.

We followed Smith's (2006) advice on how best to analyse models that include both I-C and GNI by analysing Step 2 without including national-level GNI in our models, including it only in Step 3. We also extrapolated Smith's advice to our other levels of analyses, including the main effects and cross-level interactions for individual-level Subjective Wealth and location-level Average Subjective Wealth only in Step 3, allowing us to clearly separate measures of wealth from measures of I-C. Table 4.6 shows the results for all three outcomes.

Perceived Centrality. We first investigated variations in the strength of the distinctiveness motive by analysing the cross-level interaction effects that moderated the weight of Perceived Centrality on General Distinctiveness.

Table 4.2: Zero order correlations, means, and standard deviations between within-person variables (N = 39,107). Values above the diagonal use raw ratings and below the diagonal use participant-centred ratings.

	Variable	1	2	3	4	5	6	7	*M*	*SD*
1	Centrality	-	.54	.40	.29	.06	.36	.24	7.86	2.28
2	Affect	.54	-	.42	.29	-.03	.40	.20	7.56	2.61
3	Enact	.41	.42	-	.29	.07	.34	.22	7.36	2.43
4	General Distinctiveness	.30	.29	.29	-	.25	.42	.49	6.80	2.61
5	Separateness	.06	-.03	.07	.25	-	.19	.36	5.25	3.17
6	Social Position	.36	.40	.34	.42	.19	-	.41	7.00	2.64
7	Difference	.24	.20	.22	.49	.36	.41	-	6.65	2.65

Table 4.3: Zero order correlations, means, and standard deviations between individual-level variables.

	Variable	1	2	3	4	*M*	*SD*
1	Age	-				34.16	12.60
2	Gender	-.03	-			1.57	0.50
3	I-C	-.23	-.03	-		-0.02	0.90
4	Subjective Wealth	.55	-.04	-.16	-	3.99	1.06
5	Length of Residence	.04	.02	.08	.02	22.53	14.60

Table 4.4: Zero-order correlations between location-level variables. Values are shown for the three location types both together and separately. All values represent Pearson's R correlation coefficients except those for the Urbanisation variable, which we treated as ordinal for these correlations and thus used a Spearman's Rho correlation.

	Variable	1	2	3	*M*	*SD*
1	I-C	-			0.02	0.5
2	Average Length of Residence	-.37	-		22.73	9.1
3	Average Subjective Wealth	.05	.01	-	3.92	0.58
4	Urbanisation	.04	-.23	.24		

Table 4.5: Means and standard deviations for the within-person variables across location types.

	Village		Town		City	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Centrality	8.26	2.38	7.79	2.21	7.85	2.28
Affect	8.24	2.55	7.52	2.49	7.52	2.63
Enact	7.92	2.42	7.19	2.45	7.35	2.42
General Distinctiveness	6.51	3.05	6.73	2.55	6.83	2.58
Separateness	5.29	3.42	5.1	3.14	5.27	3.16
Social Position	6.62	3.05	7.09	2.49	7.01	2.62
Difference	6.45	2.94	6.66	2.53	6.67	2.65

Table 4.6: Estimated parameters of multilevel regression models predicting Perceived Centrality, Positive Affect, and Behavioural Enactment. Due to listwise deletion, Ns for Centrality are Level 1 = 39,488, Level 2 = 5,025; for Affect are Level 1 = 39,498, Level 2 = 5,026; and Enactment are Level 1 = 39,583, Level 2 = 5,030. Level 3 and 4 Ns are identical and shown in the table. Continued…

	Step 2								
	Centrality			Affect			Enactment		
Parameters	*B*	SE	*p*	*B*	SE	*p*	*B*	SE	*p*
Within-individual main effects (Level 1)									
Intercept	8.10	0.15	<.001	8.00	0.15	<.001	7.64	0.14	<.001
Distinctiveness	0.15	0.02	<.001	0.16	0.02	<.001	0.18	0.02	<.001
Individual-level main effects (Level 2)									
Age	0.06	0.02	.004	0.09	0.02	<.001	0.01	0.02	.523
Gender	0.03	0.02	.133	-0.05	0.02	.022	0.07	0.02	.001
I-C	0.04	0.02	.074	0.09	0.03	<.001	0.10	0.03	<.001
Length of residence	0.04	0.02	.031	0.01	0.02	.610	0.04	0.02	.020
Wealth									
Location-level main effects (Level 3)									
Town (vs. Village)	-0.24	0.13	.066	-0.45	0.15	.003	-0.44	0.15	.002
City (vs. Village)	-0.40	0.13	.002	-0.07	0.15	<.001	-0.43	0.14	.002
I-C	-0.14	0.11	.215	-0.26	0.12	.032	-0.16	0.12	.176
Average length of residence	0.01	0.01	.136	0.01	0.01	.099	0.01	0.01	.051
Average Wealth									

Table 4.6: …continued…

Nation-level main effects (Level 4)									
GNI[4]									
Individual-level moderators of within-individuals slopes									
Age * Distinctiveness	0.01	0.01	.267	0.00	0.01	.561	0.00	0.01	.659
Gender * Distinctiveness	0.00	0.01	.747	0.02	0.01	.004	0.00	0.01	.414
I-C * Distinctiveness	0.01	0.01	.133	0.00	0.01	.823	0.01	0.01	.414
Length of residence * Distinctiveness	0.00	0.00	.311	0.01	0.01	.019	0.00	0.00	.105
Subjective wealth * Distinctiveness									
Location-level moderators of within-individual slopes									
Town * Distinctiveness	0.10	0.02	<.001	0.12	0.03	<.001	0.04	0.03	.084
City * Distinctiveness	0.12	0.02	<.001	0.15	0.02	<.001	0.06	0.02	.009
I-C * Distinctiveness	0.00	0.02	.992	-0.04	0.02	.021	-0.02	0.02	.116
Average residence * Distinctiveness	0.00	0.00	.853	0.00	0.00	.473	0.00	0.00	.275
Average wealth * Distinctiveness									
Nation-level moderators of within-individual slopes									
GNI * Distinctiveness									
Residual variances									
Within-person σ^2_{e0}	3.45	0.03	<.001	4.82	0.04	<.001	3.73	0.03	
Person σ^2_{u0}	1.35	0.04	<.001	1.53	0.04	<.001	1.81	0.05	
Cultural group σ^2_{v0}	0.04	0.02	.016	0.08	0.03	.002	0.06	0.02	.011
Nation σ^2_{f0}	0.14	0.04	.002	0.12	0.04	.005	0.12	0.04	.004
Deviance	168158.20			180641.21			172415.68		

Table 4.6: ...continued...

	Step 3								
	Centrality			Affect			Enactment		
Parameters	*B*	SE	*p*	*B*	SE	*p*	*B*	SE	*p*
Within-individual main effects (Level 1)									
Intercept	8.13	0.13	<.001	8.05	0.15	<.001	7.64	0.14	<.001
Distinctiveness	0.10	0.02	<.001	0.11	0.03	<.001	0.15	0.02	<.001
Individual-level main effects (Level 2)									
Age	0.06	0.02	.002	0.09	0.02	<.001	0.02	0.02	.480
Gender	0.03	0.02	.125	-0.05	0.02	.019	0.07	0.02	.001
I-C	0.04	0.02	.072	0.09	0.03	.001	0.09	0.03	<.001
Length of residence	0.04	0.02	.038	0.01	0.02	.632	0.04	0.02	.022
Wealth	0.01	0.02	.751	0.05	0.02	.018	0.05	0.02	.032
Location-level main effects (Level 3)									
Town (vs. Village)	-0.23	0.13	.076	-0.45	0.15	.003	-0.43	0.15	.003
City (vs. Village)	-0.39	0.13	.002	-0.65	0.15	<.001	-0.41	0.14	.004
I-C	-0.06	0.11	.614	-0.18	0.13	.162	-0.11	0.13	.408
Average length of residence	0.01	0.01	.102	0.01	0.01	.070	0.01	0.01	.042
Average Wealth	-0.05	0.09	.616	-0.03	0.10	.794	0.05	0.02	.032
Nation-level main effects (Level 4)									
GNI[4]	-0.08	0.04	.032	-0.07	0.04	.065	-0.04	0.04	.328

Table 4.6: …continued…

Individual-level moderators of within-individuals slopes									
Age * Distinctiveness	0.00	0.01	.788	-0.01	0.01	.365	0.00	0.01	.805
Gender * Distinctiveness	0.00	0.01	.694	0.02	0.01	.004	0.01	0.01	.338
I-C * Distinctiveness	0.01	0.01	.171	0.00	0.01	.804	0.01	0.01	.304
Length of residence * Distinctiveness	0.00	0.00	.586	0.01	0.01	.011	0.00	0.00	.114
Subjective wealth * Distinctiveness	0.01	0.01	.353	0.01	0.01	.289	-0.01	0.01	.060
Location-level moderators of within-individual slopes									
Town * Distinctiveness	0.14	0.03	<.001	0.16	0.03	<.001	0.08	0.03	.005
City * Distinctiveness	0.18	0.02	<.001	0.20	0.03	<.001	0.09	0.02	<.001
I-C * Distinctiveness	-0.04	0.02	.036	-0.06	0.02	.004	-0.02	0.02	.211
Average residence * Distinctiveness	0.00	0.00	.158	0.00	0.00	.697	0.00	0.00	.938
Average wealth * Distinctiveness	-0.08	0.01	<.001	-0.08	0.02	<.001	-0.04	0.01	.005
Nation-level moderators of within-individual slopes									
GNI * Distinctiveness	0.02	0.00	<.001	0.01	0.00	.004	0.00	0.00	.706
Residual variances									
Within-person σ^2_{e0}	3.46	0.03	.002	4.82	0.04	<.001	3.73	0.03	<.001
Person σ^2_{u0}	1.35	0.04	.020	1.53	0.04	<.001	1.80	0.05	<.001
Cultural group σ^2_{v0}	0.04	0.02	<.001	0.08	0.03	.003	0.06	0.02	.013
Nation σ^2_{f0}	0.12	0.04	<.001	0.11	0.04	.006	0.12	0.04	.004
Deviance	168087.37			180599.92			172389.37		

Neither individual-level I-C (B = .01, p = .133) nor location-level I-C (B = .00, p = 992) moderated the relationship between General Distinctiveness and Perceived Centrality, going against H2a. However, once wealth and GNI measures were included in Step 3, the cross-level interaction between General Distinctiveness and location-level I-C became significant, indicating that this relationship was stronger for respondents from more collectivistic locations (B = -.04, p = .036), in support of H2a. Simple slopes at 1SD above (0.52) and below (-0.49) the mean location-level I-C revealed that, once our measures of wealth had been accounted for, the effect of General Distinctiveness on Perceived Centrality was stronger for respondents from collectivistic locations (B = .27, p < .001) versus those from individualistic locations (B = .25, p < .001).

The significant cross-level interaction effects with the urbanisation dummy variables indicate that the relationship between General Distinctiveness and Perceived Centrality was stronger for respondents who lived in Towns (B = .10, p < .001) or Cities (B = .12, p < .001) compared to those who lived in Villages. Additional analyses using Town instead of Village as the reference category revealed that there were no differences between respondents from Cities or Towns (B = .02, p = .158). Simple slopes analysis revealed that the effects were slightly weaker for respondents from Villages (B = .16, p < .001) compared to those from Towns (B = .25, p < .001) and Cities (B = .27, p < .001), supporting H1a.

Adding individual- and local-level wealth and nation-level GNI to the models in Step 3 revealed that the relationship between General Distinctiveness and Perceived Centrality was stronger for respondents from locations where people perceived themselves as subjectively poorer (B = -.08, p < .001), as well as within richer nations (B = .02, p < .001)[4.3] , but was not moderated by an individual's self-reported subjective wealth (B = .01, p = .353). We used simple slopes to investigate these interactions further, estimating the main effects of General Distinctiveness on Perceived Centrality at 1SD above (4.50) and below (3.35) the mean of Average Subjective Wealth, and at the lower (330) and upper (86,440) bounds of GNI.[4.4] These revealed that General Distinctiveness was slightly more strongly related to Perceived Centrality in locations where people considered themselves poorer (B = .29, p < .001) than richer (B = .24, p < .001), and in richer (B = .40, p < .001), compared to poorer (B = .24, p < .001), nations.

The relationship between General Distinctiveness and Perceived Centrality was not moderated by any other moderators in the models.

Positive Affect. Next, we investigated variations in the strength of the distinctiveness motive by analysing cross-level interaction effects as possible moderators of the weight of Positive Affect on General Distinctiveness.

There were no significant interaction effects associated with the individual-level I-C moderator (B = -.00, p = .823), but a significant interaction effect associated with location-level I-C (B = -.04, p = .021). This indicates that the relationship between General Distinctiveness and Positive Affect was moderated not by the I-C orientation of individuals, but by the I-C orientation of their *local* context: General Distinctiveness more strongly predicted Positive Affect for respondents from more collectivistic *locations,* supporting H2b. We used simple slopes to probe this significant interaction by estimating main effects of General Distinctiveness on Positive Affect at 1SD above (0.52) and below (-0.49) the mean of location-level I-C. The effect of General Distinctiveness on Positive Affect was slightly stronger in collectivistic locations (B = .30, p < .001) than in individualistic locations (B = .27, p < .001).

The theoretically important cross-level interaction effects associated with the urbanisation dummy variables indicate that the relationship between General Distinctiveness and Positive Affect was also stronger for respondents from Towns (B = .12, p < .001) or Cities (B = .15, p < .001) compared to those from Villages. Additional analyses using Town instead of Village as the reference category revealed that this relationship was not significantly different for respondents from Cities compared to those from Towns (B = .03, p = .140). Simple slope analyses revealed that, while General Distinctiveness predicted Positive Affect for respondents from Villages, Towns, and Cities, the effects were slightly weaker for respondents from Villages (B = .16, p < .001) compared to those from Towns (B = .28, p < .001), which, in turn, were slightly weaker than those from and Cities (B = .31, p < .001), supporting H1b.

The cross-level interaction effects associated with Gender and Age indicate that the relationship between General Distinctiveness and Positive Affect was stronger for females compared to males, (B = .02, p = .004), but did not differ according to the respondents' age. Simple slopes revealed that the effect of General

Distinctiveness on Perceived Centrality was slightly stronger for females (B = .31, p < .001) compared to males (B = .27, p < .001)

The cross-level interaction effects associated with individual-level Length of Residence (B = .01, p = .019) and location-level Average Length of Residence (B = .00, p = .473) indicate that the relationship between General Distinctiveness and Positive Affect was stronger for people who had lived in the same place for a longer period of time, but did not differ according to the average length of time other residents had lived in a location. To investigate the significant interaction effects for Length of Residence further, we estimated the main effects of General Distinctiveness on Positive Affect at one standard deviation above (37.20) and below (7.90) the mean of Length of Residence.[4.5] The effect of General Distinctiveness on Positive Affect was slightly stronger for those who had resided in the same place for a relatively longer (B = .31, p < .001), rather than shorter time (B = .27, p < .001).

Adding in the wealth and GNI measures in Step 3 revealed that the relationship between General Distinctiveness and Positive Affect was stronger for respondents from locations where people perceived themselves as subjectively poorer (B = -.08, p < .001), and within richer nations (B = .01, p = .004)[4.6], but was not moderated by an individual's self-reported subjective wealth (B = .01, p = .289). We used simple slopes to investigate these interactions further, estimating the main effects of General Distinctiveness on Positive Affect at 1SDs above and below Average Subjective Wealth, and at the lower and upper bound of GNI. These revealed that General Distinctiveness was slightly more strongly related to Positive Affect in locations where people considered themselves poorer (B = .31, p < .001) than richer (B = .27, p < .001), and in richer (B = .36, p < .001), compared to poorer (B = .28, p = .002), nations.

Behavioural Enactment. Next, we investigated variations in the strength of the distinctiveness motive by analysing the cross-level interaction effects that moderated the relationship between General Distinctiveness and Behavioural Enactment.

The interaction effects associated with the I-C moderators indicate that an individual's I-C orientation did not moderate the relationship between General Distinctiveness and Behavioural Enactment (B = .01, p = .414), nor did the I-C orientation of an individual's local context (B = -.02, p = .116), against H2c.

The interaction effects associated with the urbanisation dummy variables indicate that the relationship between General Distinctiveness and Behavioural Enactment was stronger for respondents from Cities compared to those from Villages (B = .06, p = .009), but there was no significant difference between respondents from Towns and Villages (B = .04, p = .084). However, adding in the wealth and GNI measures in Step 3 changed the cross-level interaction between the urbanisation dummy and General Distinctiveness, so that the relationship between General Distinctiveness and Behavioural Enactment was now stronger in *both* Towns (B = .08, p = .005) and Cities (B = .09, p < .001) compared to Villages, supporting H1c. Additional analyses revealed that the relationship did not differ between respondents from Cities compared to those from Towns (B = .02, p = .310). We again did simple slopes estimating the main effect of General Distinctiveness on Behavioural Enactment for respondents from each location type separately, which revealed the effect was strongest for respondents from Cities (B = .24, p < .001), next strongest in those from Towns (B = .23, p < .001), and weakest in those from Villages (B = .15, p < .001).

Neither Age, Gender, Length of Residence, nor Average Length of Residence moderated the relationship between General Distinctiveness and Behavioural Enactment.

Adding in the wealth and GNI measures in Step 3 revealed that the relationship between General Distinctiveness and Behavioural Enactment was stronger for respondents from locations where people perceived themselves as subjectively poorer (B = -.04, p = .005), but was not moderated by an individual's self-reported subjective wealth (B = -.01, p = .060) or national GNI (B = .00, p = .706). We used simple slopes to investigate these interactions further, estimating the main effects of General Distinctiveness on Perceived Centrality at 1SD above and below the mean of Average Subjective Wealth, which revealed that General Distinctiveness was slightly more strongly related to Behavioural Enactment in locations where people considered themselves poorer (B = .25, p < .001) than richer (B = .22, p < .001).

Sources of Distinctiveness

To test for individual, local, and/or national variations in the way feelings of distinctiveness were constructed from identities, we next computed a series of steps regressing General Distinctiveness ratings on ratings for the three theorised sources

of distinctiveness—Social Position, Separateness, and Difference—and investigating cross-level interaction effects with individual-, local-, and national-level moderators.

Step 1. We first included the three Sources of Distinctiveness as the sole Level 1 predictors of General Distinctiveness to investigate if all three sources did indeed predict the General Distinctiveness of identity aspects overall. As expected, the ratings for Social Position (B = .22, p < .001), Separateness (B = .07, p < .001), and Difference (B = .33, p < .001) associated with identity aspects all positively predicted the General Distinctiveness ratings of those identity aspects, indicating that, overall, feelings of general distinctiveness are constructed from identity aspects that are associated with social positions, separateness from others, and difference from others.

Step 2. Next, we tested cross-level interaction effects to investigate if the relative weights of General Distinctiveness on the three sources of distinctiveness were moderated by any individual (Age, Gender, I-C, Length of Residence) and/or local factors (I-C, Average Length of Residence, Urbanisation), the results of which are shown in Table 4.7. We again analysed Step 2 without measures of Subjective Wealth, Average Subjective Wealth, and GNI, including them only in Step 3.
The interaction effects associated with the measures of I-C at the individual- and local-levels of analysis indicate that Social Position was a relatively more important source of General Distinctiveness for more collectivistic respondents (B = -.03, p < .001), and for respondents from more collectivistic locations (B = -.06, p < .001). Simple slopes estimating the effect of Social Position on General Distinctiveness as 1SD above (0.89) and below (-0.93) the mean of individual-level I-C, and at 1SD above (0.52) and below (-0.49) the mean of location-level I-C revealed that the effect of Social Position on General Distinctiveness was stronger for collectivistic (B = .24, p < .001), rather than individualistic (B = .19, p < .001), respondents, and for respondents from collectivistic locations (B = .25, p < .001) than from individualistic locations (B = .18, p < .001), supporting H6. Conversely, but in line with our hypotheses, Difference was a relatively more important source of General Distinctiveness for more individualistic respondents (B = .02, p < .001), and for respondents from more individualistic locations (B = .10, p = .022). Simple slopes revealed the effect of Difference on General Distinctiveness was stronger for individualistic (B = .35, p < .001) rather than collectivistic (B = .31, p < .001) respondents, and for respondents from individualistic (B = .39, p < .001) rather than

collectivistic (B = .28, p < .001) locations, supporting H7. However, adding in wealth and GNI measures in Step 3 rendered the cross-level interaction effect between location-level I-C and Difference non-significant (B = .01 p = .532), suggesting that the moderation of the relative importance of Difference as a source of distinctiveness according to location-level I-C may have been due to differences in wealth. The relative importance of Separateness for General Distinctiveness satisfaction was not moderated by either individual- (B = .00, p = .943) nor local-level I-C (B = -.02, p = .060), in contrast to H8 (see note 4.2).

The theoretically important interaction effects associated with the urbanisation dummy variables indicates that Social Position was a relatively more important source of General Distinctiveness for respondents from Villages compared to those from Towns (B = -.05, p = .019), but that it did not differ in importance between respondents from Villages or Cities (B = -.01, p = .598). Additional analyses revealed that Position was a relatively more important source of distinctiveness for respondents from Cities (B = .04 p = .002) compared to those from Towns. Simple slopes revealed that the effect of Social Position on General Distinctiveness was strongest for respondents from Villages (B = .23, p < .001), next strongest for those from Cities (B = .22, p < .001), and weakest for those from Towns (B = .18, p < .001), partially supporting H3. However, including measures of wealth and GNI in Step 3 decreased the cross-level interaction effect associated with the Town dummy variable and Social Position to non-significance (B = -.03 p = .214), suggesting that the differences between respondents from Towns and Villages in the relative importance of Social Position as a source of General Distinctiveness was accounted for by differences in Subjective Wealth between Towns and Villages.

Table 4.7: Estimated parameters from multilevel regression predicting General Distinctiveness. Continued…

	Step 2			Step 3		
Parameters	*b*	SE	*p*	*b*	SE	*p*
Within-individual main effects (Level 1: N = 39,488)						
Intercept	6.52	0.19	<.001	6.60	0.19	<.001
Position	0.23	0.02	<.001	0.20	0.02	<.001
Separateness	0.12	0.02	<.001	0.12	0.02	<.001
Difference	0.25	0.02	<.001	0.22	0.02	<.001
Individual-level main effects (Level 2: N = 5,025)						
Age	0.00	0.03	.992	0.00	0.03	.918
Gender	-0.05	0.03	.042	-0.05	0.03	.042
I-C	0.21	0.03	<.001	0.21	0.03	<.001
Length of residence	-0.02	0.02	.487	-0.02	0.02	.452
Wealth				0.02	0.03	.529
Location-level main effects (Level 3: N = 169)						
Town (vs. Village)	0.25	0.18	.176	0.25	0.18	.157
City (vs. Village)	0.09	0.18	.622	0.09	0.18	.628
I-C	-0.13	0.16	.399	-0.02	0.16	.888
Average Length of Residence	0.00	0.01	.667	0.00	0.01	.783
Average Wealth				0.01	0.13	.934
Nation-level main effects (Level 4: N = 33)						
GNI				-0.15	0.06	.008
Individual-level moderators of within-individuals slopes						
Age * Position	-0.03	0.00	<.001	-0.02	0.00	<.001
Age * Separateness	0.00	0.00	.657	0.00	0.00	.998

Table 4.7: …continued…

Age * Difference	0.02	0.01	<.001	0.00	0.01	.443
Gender * Position	0.01	0.00	.043	0.01	0.00	.044
Gender * Separateness	0.00	0.00	.357	-0.01	0.00	.198
Gender * Difference	-0.01	0.01	.044	-0.01	0.01	.031
I-C * Position	-0.03	0.01	<.001	-0.02	0.01	<.001
I-C * Separateness	0.00	0.01	.943	0.00	0.01	.665
I-C * Difference	0.02	0.01	<.001	0.02	0.01	.008
Length of residences * Position	0.01	0.00	.164	0.00	0.00	.397
Length of residence * Separateness	-0.01	0.00	.070	-0.01	0.00	.042
Length of residences * Difference	-0.02	0.00	<.001	-0.01	0.00	.045
Wealth * Position				0.00	0.00	.767
Wealth * Separateness				0.01	0.00	.126
Wealth * Difference				0.02	0.01	<.001
Location-level moderators of within-individual slopes						
Town * Position	-0.05	0.02	.019	-0.03	0.02	.214
Town * Separateness	-0.01	0.02	.642	-0.01	0.02	.629
Town * Difference	0.08	0.03	.003	0.09	0.03	.001
City * Position	-0.01	0.02	.598	0.02	0.02	.278
City * Separateness	-0.06	0.02	.002	-0.07	0.02	.001
City * Difference	0.09	0.02	<.001	0.12	0.02	<.001
I-C * Position	-0.06	0.01	<.001	-0.04	0.02	.011
I-C * Separateness	-0.02	0.01	.060	0.00	0.01	.920
I-C * Difference	0.10	0.02	<.001	0.01	0.02	.532
Aggregated Length of Residence * Position	0.00	0.00	.545	0.00	0.00	.479

Table 4.7: …continued…

Aggregated Length of Residence * Separateness	0.00	0.00	.729	0.00	0.00	.843
Aggreagated Length of Residence * Difference	0.01	0.00	<.001	0.01	0.00	<.001
Aggreagated Wealth * Position				-0.07	0.01	<.001
Aggreagated Wealth * Separateness				-0.01	0.01	.616
Aggreagated Wealth * Difference				-0.04	0.01	.007
Nation-level moderators of within-individual slopes						
GNI * Position				0.00	0.00	.629
GNI * Separateness				-0.01	0.00	<.001
GNI * Difference				0.05	0.00	<.001
Residual variances						
Within-person σ^2_{e0}	2.79	0.02	<.001	2.77	0.02	<.001
Person σ^2_{u0}	2.93	0.07	<.001	2.93	0.07	<.001
Cultural group σ^2_{v0}	0.10	0.04	.007	0.09	0.04	.008
Nation σ^2_{f0}	0.34	0.10	.001	0.28	0.09	.001
Deviance	165406.83			165180.88		

Difference was a relatively more important source of General Distinctiveness satisfaction for respondents from Towns (B = .08, p = .003) or Cities (B = .09, p < .001) compared to respondents from Villages. Additional analyses revealed that there was no difference in the importance of Difference as a source of distinctiveness for respondents from Cities (B = .01 p = .617) compared to those from Towns. Simple slope analyses revealed that the effect of Difference on General Distinctiveness was very similar for respondents from Cities (B = .34, p < .001) and Towns (B = .33, p < .001), but weaker for those from Villages (B = .25, p < .001), supporting H4.

Separateness was a relatively less important source of General Distinctiveness for respondents from Cities compared to those from Villages (B = -.06, p = .002), but there was no difference between those from Towns compared to those from Villages (B = -.01, p = .642). Additional analyses revealed that Separateness was less important as a source of distinctiveness for respondents from Cities (B = -.05 p < .001) compared to those from Towns. Simple slope analysis revealed that the effect of Separateness on General Distinctiveness was strongest for respondents from Villages (B = .12, p < .001), slightly weaker for respondents from Towns (B = .11, p < .001), and weakest for those from Cities (B = .06, p < .001), in direct contrast to H5. Figure 4.2 shows the effects of the three sources on General Distinctiveness across the three levels of urbanisation in the final model.

The interaction effects associated with Age and Gender indicate that Social Position was a relatively more important source of General Distinctiveness for younger respondents (B = -.03, p < .001), and for females compared to males (B = .01, p = .043). Difference, however, showed the opposite pattern of results; it was a relatively more important source of General Distinctiveness for older respondents (B = .02, p = .006), and for males compared to females (B = -.01, p = .044). Simple slopes at 1SD above (46.75) and below (22.06) the mean for Age, and for males and females separately, revealed that the effect of Social Position on General Distinctiveness was slightly stronger for younger (B = .25, p < .001) compared to older (B = .19, p < .001) respondents, and for females (B = .23, p < .001) compared to males (B = .21, p < .001), whereas the effect of Difference on General Distinctiveness was slightly stronger for older (B =.36, p < .001) compared to younger (B = .31, p < .001) respondents, and for males (B = .34, p < .001) compared to females (B = .32, p < .001). However, adding the wealth and GNI measures in

Step 3 rendered the Age by Difference interaction non-significant, indicating that variation in the importance of Difference as a source of distinctiveness between respondents of different ages was accounted for by differences in their Subjective Wealth. The relative importance of Separateness was not moderated by Age or Gender.

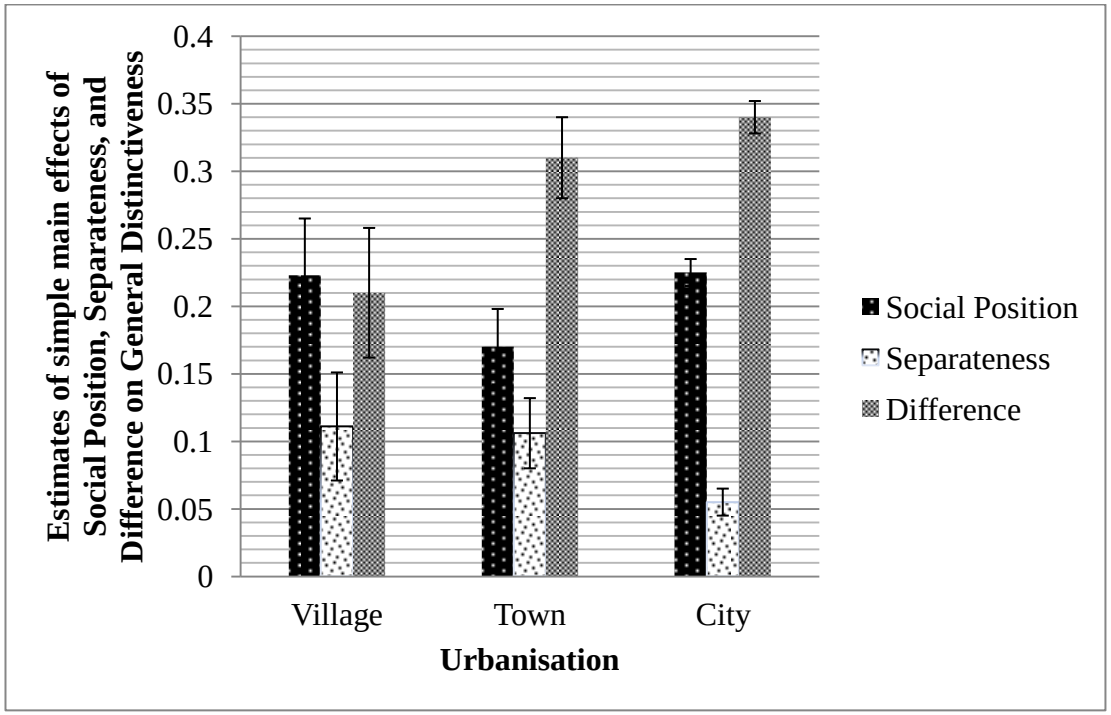


Figure 4.3: Parameter estimates for the main effect of the three sources of distinctiveness on General Distinctiveness for respondents from Village/rural areas, Towns, and Cities in Step 3. Error bars represent +/- 2SEs of the parameter estimates.

The interaction effects associated with individual-level Length of Residence and local-level Average Length of Residence indicate that the relative importance of Social Position was not moderated by either Length of Residence (B = .01, p = .164) nor Average Length of Residence (B = .00, p = .545). Difference, however, was a relatively more important source of General Distinctiveness satisfaction for respondents who had lived in the same location for less time (B = -.02, p < .001), and for respondents from locations where the other residents had, on average, lived for more time (B = .01, p < .001). Simple slopes at 1SD above (37.20) and below (7.86) the mean for length of residence, and 1SD above (32.13) and below (13.76) the mean

of Average Length of Residence, revealed that the effect of Difference on General Distinctiveness was stronger for respondents who had lived in the same location for less (B = .36, p < .001), rather than more, (B = .31, p < .001) time, and for respondents from locations where other residents had, on average, lived for more (B = .37, p < .001), rather than less (B = .29, p < .001), time. The relative importance of Separateness was not moderated by either Length of Residence (B = -.01, p = .070) or by Average Length of Residence (B = .00, p = .729) in Step 2, but became significant in Step 3 (B = -.01 p = .042).

Adding in measures of wealth and GNI in Step 3 revealed that Social Position was a relatively less important source of General Distinctiveness for respondents from locations where residents considered themselves richer (B = -.07, p < .001), but did not vary in relative importance according to an individual's subjective wealth (B = .00, p = .767) nor national GNI (B = .00, p = .629). Simple slopes at 1SD above (4.50) and below (3.35) the mean for Average Subjective Wealth revealed that the effect of Social Position on General Distinctiveness was stronger for respondents from poorer (B = .26 p < .001) rather than richer (B = .19 p < .001) locations. Difference was a relatively more important source of General Distinctiveness satisfaction for respondents who considered themselves wealthier (B = .02 p < .001) and were from richer nations (B = .05, p < .001), but was less important within locations where residents considered themselves richer (B = -.04, p = .007). Simple slopes at 1SD above (5.05) and below (2.93) Subjective Wealth, above (4.50) and below (3.35) Average Subjective Wealth, and the upper (86,440) and lower (330) boundaries of GNI revealed that the effect of Difference on General Distinctiveness was stronger for respondents who considered themselves richer (B = .36 p <.001), were from poorer locations (B = .34 p < .001), and were from richer nations (B = .66 p < .001), than those who considered themselves poorer (B = .31 p < .001), were from richer locations (B = .32 p < .001), and were from poorer nations (B = .28 p < .001). The relative importance of Separateness was not moderated by an individual's subjective wealth (B = .01, p = .126), nor by the average subjective wealth of residents within the location within which a respondent lived (B = -.01, p = .616), but was relatively less important within richer nations (B = -.01, p < .001). Simple slopes revealed that the effect of Separateness on General Distinctiveness was stronger for respondents from poorest nations (B = .07, p < .001) compared to those

from the richest nations (B = .00, p = .910), where Separateness did not predict General Distinctiveness.[4.7]

Discussion

The Strength of the Distinctiveness Motive

Respondents from 169 locations across 33 countries generally rated aspects of their identities as more self-defining, associated them with greater positive affect, and enacted them more in their everyday behaviours if those identity aspects provided them with feelings of distinctiveness. Furthermore, people's identity processes seemed to be influenced by the distinctiveness motive regardless of their surrounding context or any individual differences: general distinctiveness ratings for identity aspects predicted the perceived centrality, positive affect, and behavioural enactment of those identity aspects highly significantly ($p < .001$) across a range of values of individual, local, and national factors. Thus, our results are consistent with viewing distinctiveness as a universal identity motive, and extend Becker et al.'s (2012a) previous findings to a large and diverse range of contexts, and to adult populations.

This does not mean, however, that the context in which an individual lives has no influence on the strength of the distinctiveness motive. Indeed, in line with our predictions, distinctiveness ratings were more strongly related to the perceived centrality (H1a), positive affect (H1b), and behavioural enactment (H1c) of identity aspects within more urbanised locations. Drawing on the universalist approach to the distinctiveness motive (Becker et al., 2012a; Vignoles, 2011), these results support our contention that distinctiveness is relatively easily achieved within more rural locations, causing the motive to become a weaker motivational force. Within more urbanised locations, however, the motive seems to become frustrated and therefore more activated (Brewer & Roccas, 2001; Lo et al., 2011).

We found that the strength of the distinctiveness motive did not vary according to individual I-C[4.8], strengthening Becker and colleagues' (2012a) suggestion that individual differences account for only a very small amount of variation, if any, in the strength of the motive. Furthermore, measuring culture at a more fine-grained level of analysis than Becker and colleagues, we found that an individual's surrounding context did not affect the behavioural enactment of their distinctive identity elements, going against H2c. However, respondents from

locations where people were, on average, more collectivistic associated the more distinctive aspects of their identity with more positive affect, in line with H2b, and, once we controlled for differences in wealth, placed greater importance on them within their self-definitions, in line with H2a. Thus, although we did not find the same pattern across all our models, our results support Becker and colleagues' conclusions that the distinctiveness motive becomes more frustrated, and therefore more activated, within cultural contexts where distinctiveness is not valued (Brewer & Roccas, 2001; Lo et al., 2011) supporting the conception that identity motives are universal rather than culturally specific (see note 4.2).

Interestingly, the relationship between the distinctiveness ratings of identity aspects and the positive affect associated with them showed much more moderation by individual and contextual factors than the relationship between the distinctiveness ratings and ratings of perceived centrality or the amount of behavioural enactments. Thus, while the effect of the distinctiveness motive on cognitive and behavioural identity processes seems relatively stable across individuals and contexts, its effect on affective identity processes seems much more variable. Recent acculturation work suggests that (particularly positive) emotion matching is an important component of acculturation (De Leersnyder, Mesquita, & Kim, 2011), and that particular emotions are associated with different experiences for people within different cultures (Kitayama, Markus, & Kurokawa, 2000), thus, it may be that culture affects emotions more than cognitive and behavioural processes. However, this is post hoc speculation and more research is needed before any strong conclusions can be drawn.

Sources of Distinctiveness

We also found that feelings of general distinctiveness were, in general, gained through identity aspects that were associated with the three sources of distinctiveness suggested by Vignoles and colleagues (Becker et al., 2012a; Vignoles, 2009): social position, difference, and separateness. Feelings of general distinctiveness gained from respondents' identity aspects were strongly (ps < .001) related to identity aspect ratings for the three sources of distinctiveness. This was true across the whole range of investigated values for individual difference factors, and true for social position and difference across the whole range of values for contextual factors, and for separateness within all contexts except the wealthiest nation (see note 4.7).

On average, difference and social position were both found to be strong predictors of general distinctiveness. In line with Becker and colleagues (2012a), we found that difference was the most important source of distinctiveness, reflecting the dominant conception of distinctiveness in the psychological literature (Lynn & Snyder, 2002; Snyder & Fromkin, 1980). However, we found that social position was only very slightly less important as a source of distinctiveness than difference, whereas it was much less important within Becker and colleagues' sample. Although this could be due to our diverse sampling where we attempted to reach many collectivistic groups, it may be that social position is a more important source of distinctiveness for adults compared to the adolescents Becker and colleagues studied, reflecting suggestions in the literature that a collectivistic focus increases throughout the life span (see Triandis, 1995), and that identity construction priorities can change with life stage (Erikson, 1980).

Separateness was again found to be the least important source of distinctiveness, and was actually a non-significant predictor of general distinctiveness in one of our national samples (see note 4.6). This may be due to potential problems with satisfying the distinctiveness motive through separating oneself from the community and from others. For example, while separateness may satisfy the distinctiveness motive, it may frustrate some of the other motives that shape identity, especially the belonging motive (Vignoles, 2009, 2011), making separateness a relatively problematic and unattractive way to achieve distinctiveness. However, little work has been done looking at how the way people satisfy particular identity motives can impact upon the other motives, something which future research should investigate (but see Easterbrook et al., 2012).

We found that social position was a more important source of distinctiveness for collectivistic respondents, and for respondents from more collectivistic locations, reflecting the collectivistic priorities of group belonging, tradition, duty, conformity, and connectedness. This is in line with Becker and colleagues' (2012a) findings that social position was more important as a source of distinctiveness for individuals living in collectivistic contexts. However, within our sample of adults, individual-level collectivism was also a strong and reliable predictor of the increased importance of social position, suggesting that individual values, beliefs, and self-construals have a greater influence upon the relative importance of social position as a source of distinctiveness for adults in comparison to adolescents.

We also found that social position was a relatively more important source of distinctiveness satisfaction for respondents from villages and cities compared to towns, and, although non-significant, slightly more important for respondents from villages compared to cities. This only partially supports H3, with a surprising finding that social position was almost equally important within cities compared to villages. These differences, however, disappeared once we accounted for wealth in our models, suggesting that social position may not be related to the surrounding level of urbanisation, but instead to measures of the surrounding wealth. Social position, then, seems to be a more important source of distinctiveness for more collectivistic people, within locations where, on average, people report that their families are poorer, and where people are more collectivistic, irrespective of urbanisation.

We also found that difference was a relatively more important source of distinctiveness for more individualistic individuals, again suggesting the heightened importance of individual values, beliefs, and self-construals within our adult (versus Becker et al.'s, (2012a) adolescent) sample. The effect of location-level I-C on difference varied according to whether measures of wealth were included in the model. Without wealth, we replicated Becker and colleagues' findings that difference was more important within individualistic contexts, reflecting the cultural emphasis on uniqueness, difference, privacy, and independence. However, once we accounted for wealth in our models, this effect disappeared, suggesting that the influence of contextual I-C on the importance of difference was actually due to contextual differences in wealth. We also found that difference was a relatively more important source of general distinctiveness for respondents from more urbanised areas, supporting H4. It seems then, that "city air brings freedom" (Yamagishi et al., 2012), liberating people from the bounds of rural traditionalism and enabling them to express their personal differences and uniqueness. Taken with the above results for the strength of the motive, our results suggest that city life does indeed enable people to express their differences, but that they also have to strive harder to achieve distinctiveness than rural dwellers, reflected in a stronger motive for distinctiveness.

We found that separateness was a relatively unimportant source of distinctiveness for our adult sample, and did not vary according to individual- or contextual-differences in I-C. Again, this may be because, regardless of individual

or cultural values, beliefs, and self-representations, separateness is a problematic way to achieve distinctiveness and is therefore avoided. We also found that separateness was a more important source of distinctiveness for those from more rural areas, contrary to H5. This may be due to an increasing amount of commuters and second-home owners moving to villages, who may find it difficult or be unwilling to integrate into long establish rural communities. Alternatively, pressures from village communities where cohesion is based upon shared similarities (Durkheim, 1893/1964) may make people feel that any part of their identity that distinguishes them from others also acts to separate them from others. Indeed, further investigations found that the correlations between ratings for separateness and the two other sources of distinctiveness was higher for village dwellers than for town or city dwellers. Another possible explanation is that we may have overestimated the prevalence of alienation in cities. For example, C. S. Fischer's sub-cultural theory of urbanism (1973) suggests that cities offer people with unconventional attitudes or interests the opportunity to express these differences, rather than being derogated or ostracised by strict and traditional village communities. Furthermore, when a sufficient number and density of people with the same unconventional attitudes or interests is reached—something that is only possible within cities—subcultures form that are based upon and thus promote the very characteristics that would have caused the same people to be ridiculed within more rural areas. Hence, as our results suggest, villages, not cities, may be more alienating.

Our results indicate that individual, local, and national factors influence how people construct feelings of distinctiveness in a complex way. The strength of the distinctiveness motive and the relative importance of each source of distinctiveness were moderated by a different set of factors, and the effects of these factors changed according to what was included in the models. This emphasises the multifaceted nature of an individual's context, and the complex and subtle ways it can influence their psychological processes. Our results suggest that cross-cultural psychologists need to adopt a holistic approach to culture, including, at the very least, normative measures of the prevailing beliefs, values, and self-representations in an individual's surroundings, as well as more structural variables such as urbanisation. This is to say nothing about other perspectives on culture that suggest alternative mechanisms through which culture may influence psychological processes (e.g. Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; Yamagishi, 2010).

Strengths, Limitations, and Future Directions

We were among the first to follow Brewer and Chen's (2007) theoretical framework that suggests culture encompasses values, beliefs, and self-representations, by constructing a new and broad measure of I-C. Using this measure, we partially replicated Becker and colleagues' (2012a) results, as well as finding equivalent results from our own analyses when we used this new I-C measure at the local- and national-levels of analysis (see note 4.2). Thus, our new measure of I-C appears both a valid and reliable way of measuring the multifaceted nature of normative culture. Furthermore, we measured I-C at the level of location, reflecting suggestions in the literature that nations do not represent cultural units (Baskerville, 2003; House & Javidan, 2004; Tung, 2007; but see Minkov & Hofstede, 2012) and enabling us to compare the effects of urbanisation and I-C at the appropriate location-level of analysis. We found similar results whether we measured I-C at the national- or local-level (see note 4.2), suggesting the national and local context are both important sources of normative cultural influence and that researchers should endeavour to measure culture at multiple levels. Finally, we also add to the literature on the distinctiveness motive by sampling from adult populations across a diverse range of nations and locations, providing evidence of the generality of previous findings regarding the distinctiveness motive (e.g. Becker et al., 2012a).

Despite these strengths, our measure of urbanisation was rather crude, and respondents from the same location often disagreed about how best to classify their location. Future studies would benefit from using more objective measures of urbanisation, perhaps with local measures of population density or fractionalization (Alesina, Devleeschauwer, Easterly, & Kurlat, 2003).

As we suggested above, future studies should look at how the way people satisfy the distinctiveness motive influences other identity motives. MICT (Vignoles, 2011) proposes that there are at least five other identity motives that influence identity processes, all of which could potentially interact and influence each other. For example, it has been found that within-person correlations between ratings for distinctiveness and belonging range from -1.00 to +.97 (Vignoles, 2009), and it is likely that the way these motives are satisfied can explain some of this variation. Furthermore, Vignoles (2011) argues that the other identity motives within MICT can also be construed as culturally flexible universals, and Becker and colleagues (Becker et al., 2012b) have found evidence suggesting the self-esteem

motive is constructed relatively differently according to cultural values. Future research should investigate the ways the other identity motives can be satisfied, and whether this varies according to culture.

In summary, this study achieved several things. Firstly, extending Becker and colleagues (2012a) findings, we have provided evidence that the identity processes of adults across a large and diverse range of cultures and locations are influenced by the distinctiveness motive. Furthermore, both adults and adolescents can gain feelings of distinctiveness through aspects of their identities that are associated with social positions, feelings of difference, and/or feelings of separateness. We also demonstrated the importance of measuring urbanisation, which influenced both the strength of the distinctiveness motive and the way people achieved feelings of distinctiveness. Finally, our results emphasise the importance of measuring multiple aspects of an individual's surrounding context, as different contextual facets can have different effects upon psychological processes.

Notes

4.1. Sample sizes are slightly different for the four sets of analyses due to listwise deletion on the included variables.

4.2. We also ran models where we measured and analysed I-C at the national-level of analysis rather than the local level. These models gave substantially the same results, with the same pattern of significances as those reported here, replicating the results found by Becker and colleagues (2012a) for H6 and H7. As well as this, we also analysed models that included both local- and nation-level I-C. However, there were clearly statistical problems with these models, as the results at the two levels of analysis consistently gave opposite and contradictory results. Hence, we focus on the modelling I-C at the local-level only.

4.3. We investigated this further using a 3-way interaction between General Distinctiveness, Average Subjective Wealth, and GNI, but this was non-significant.

4.4. For GNI M = 18,185.63; SD = 21,062.62. Because of this, computing simple slopes at 1SD below the mean would have estimated the slope at an impossible negative value of GNI, hence we use the upper and lower boundary for the simple slope analyses.

4.5. We estimated all simple slopes (except those associated with the urbanisation dummy variables) with the urbanisation dummy variable removed from

the analyses to get an estimate of the main effect for distinctiveness across all types of locations, rather than just at the reference location.

4.6. We again investigated this further using a 3-way interaction between General Distinctiveness, Average Subjective Wealth, and GNI, but this was non-significant.

4.7. We also investigated if Separateness predicted General Distinctiveness at the second highest value of GNI (48,930). Here, Separateness significantly predicted General Distinctiveness (B = .03, p = .009), suggesting it is only for the nation with the highest GNI (Norway), where Separateness is unimportant for General Distinctiveness. As Norway has a relatively low sample size (19), this should be taken with caution.

4.8. This was true across all our models except the Step 2 model predicting Positive Affect. As this effect was not found for the other identity outcomes, and disappeared once wealth was controlled for, we can conclude that individual I-C does not moderate the strength of the distinctiveness motive.

CONCLUSION

General Conclusions

Humans are inherently social beings, and this is reflected by the fact that much of our behaviours, cognitions, and emotions are linked to, or dependent upon, others (e.g. Tajfel & Turner, 1979; Baumeister & Leary, 1995). To me, it seems illogical to try to understand people as single individuals or disconnected entities: we are so inherently social that it seems, in my mind, a given that the vast majority of psychological phenomenon will be altered by, directed towards, dependent upon, or inseparable from our social interactions. This is the basic thought underlying the research presented in this thesis, and the results, both indirectly and directly, support this idea.

Although only Paper 3 directly measured social interactions, they are implicated in all the four papers: Paper 1 highlights the importance of recognising that not all groups are conceived of as cognitive social categories, demonstrating that different motivations predict identification with groups that are conceived of as a set of interpersonal relationships rather than a social category. Paper 2 shows that feelings of belonging gained from memberships within groups are not always based upon perceptions of homogeneity and prototypicality, but can also be based upon how satisfying the interpersonal relationships with the other members are. Paper 3 shows how the built environment can influence social interactions, and how this, in turn, influences the interpersonal bonds between new flatmates, and their well-being. Finally, Paper 4 proposes that urbanisation affects the way people distinguish themselves from each other, consistent with theorised differences in how people interact within villages, towns, and cities.

Papers 1 and 2 show that there are important differences between groups that are based upon interpersonal interactions—network groups—and those based upon shared definitions—social categories. Social categories are based upon categorical perceptions, and they become important to people's self definitions if they provide them with a sense of meaning in their life and enable them to positively distinguish themselves from others. What's more, people gain feelings of belonging from their memberships within social categories mainly through categorical perception processes. Interpersonal network groups, however, are based upon the interpersonal relations between the group members. Such groups become important to people if

their members can gain feelings of belonging from these relationships, and a sense that they are competent and capable at enacting their roles.

The findings from Papers 3 and 4 highlight the role that the physical environment can play in identity and group processes. Previous psychological research has suggested that the way that people understand and utilise the physical environment reflects their underlying psychological processes (e.g. Dixon & Durrheim, 2003), with very little research looking at the reverse direction: how the built environment can influence these processes. By drawing on a symbolic interactionist perspective, these two papers suggest ways that the physical environment—at both the micro- and macro-level—can influence these processes through altering the meaning and frequency of behavioural interactions between people, with Paper 3 directly measuring this and linking it to well-being.

Possible Limitations

Papers 1 and 2 could be seen to be based on conflicting theoretical arguments: Paper 1 argues that the belonging motive is not involved when people identify with a social category, while Paper 2 argues that feelings of belonging can be gained from social categories through the categorical perceptions outlined by self categorisation theory (SCT, see Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). However, there are several differences between these studies that I believe make them compatible. Firstly, Paper 1 focused on a specific novel social category, whereas Paper 2 focused on self-selected and established social categories. Relating to this, Paper 1 used the identity motives to predict identification, whereas Paper 2 used specific aspects of categorical perception to predict feelings of belonging. Thus, feelings of belonging may take time to develop and hence not predict identification with novel social categories, only coming into play once one's membership within a social category is established. Furthermore, in Paper 1, the belonging motive was associated with social categories until the nested interpersonal group of one's flatmates had been statistically controlled for. We did not control for any super/sub-ordinate social identities in Paper 2, thus the belonging motive may be implicated with social categories because of interpersonal network groups that are nested within them. Indeed, as Either & Deaux (1994) showed, interpersonal groups are often formed within social categories, supporting this idea. This may account for the finding that interpersonal bonds between the members of social categories also predicted feelings of belonging.

Understanding the psychological differences between types of social groups is an important area that is often overlooked, but, as the results presented in this thesis show, there are important differences between how groups are conceptualised, which can lead on to important consequences. However, although I write as if these types of groups were clearly demarcated and distinct from each other, this is almost certainly not the case. The vast majority of groups will have some cognitive elements that give rise to the cognitions and perceptions associated with social categories, as well having important behavioural, interactive, and relational elements. Indeed, the results from Papers 1 and 2 indicated this: it was only once I controlled for the super/sub-ordinate identities in Paper 1 that there became a clear difference between the two types of groups in the motives that predicted identification, suggesting that most groups involve motives associated with both enactment and definition, perhaps because of their inevitable links to other super- and/or sub-ordinate identities. In Paper 2, feelings of belonging associated with social categories were prospectively predicted by both intragroup similarity *and* interpersonal bonds, again suggesting that these groups were not perceived simply as cognitive social categories. Indeed, Tom Postmes and colleagues (Jans, Postmes, & Van der Zee, 2011; Postmes, Spears, Lee & Novak, 2005) have found that, although the antecedents can be quite different, self-categorisation processes do occur within small, interactive, network groups. However, it is often necessary to make stark (and sometimes forced) distinctions to investigate the extremes of a continuum in order to make a point.

More generally, the research reported in this thesis is largely based upon self-reported questionnaires. This enabled us to investigate processes that related to real-life situations and real-life groups, providing a degree of ecological validity to the findings that is often lacking from laboratory-based research. Furthermore, the use of longitudinal designs helped suggest the direction of causality. However, without experimental data, no definite conclusions can be made about causality, and hence future studies that utilise experimental designs to confirm the directional links would be a nice addition to the work presented here. What's more, although the design in Papers 2 and 4 allowed respondents to select their own identity aspects, this thesis is heavily based upon quantitative questionnaires, and therefore lacked the idiographic detail that qualitative methods can produce. This would be a fruitful addition to the

findings from this thesis, and could provide new insights into the experiential aspects of the topics covered.

Future Directions

A fascinating avenue for future research would be to explore the consequences of changing how people perceive a particular group. For example, it has been argued that identifying with a network group can increase a person's well-being by increasing their perceptions of the amount of social support they have available (see Sani, 2011, for a review), while identifying with social categories has been shown to increase resilience to challenges (Jones & Jetten, 2010). It may be possible, therefore, to alter how a particular group is perceived—as a network of relationships or as a cognitive social category—so that different outcomes can be achieved. Much work rooted in SCT has investigated the conditions under which people come to define themselves in terms of their social groups (see Turner, Oakes, Haslam, & McGarty, 1994), and hence provides a strong basis for devising interventions to alter people's conceptualisation of their social groups.

Another possibility for future research in this direction is one I find particularly exciting. As suggested above, identities are evaluated and modified through social interactions, within which people can choose which identity aspects they wish to show to others (e.g. Swann & Read, 1981; Schlenker, 2003), and fight against being categorised against their will (Barreto & Ellemers, 2009). Thus, people can be agents over their own identities within interactions with others, using the interactions to shape their perceived identity. I believe that interactive network groups can provide an arena within which people can use social creativity strategies to change their identities. Indeed, this already seems to be the practice of particular organisations: Alcoholics Anonymous, for example, propose that accepting that one is an alcoholic is the first step to recovery. People do not want to define themselves with such a stigmatised identity, for which they probably have a range of negative stereotypes, but, once they have identified themselves as an alcoholic and join the regular small group meetings, they can begin to change the content of this new identity by acting in a different ways, and by being within a group that supports a different conception of the identity.

Relating to this argument, Postmes and colleagues (Jans et al., 2011; Postmes et al., 2005) have shown that group members can inductively influence the group's identity through their interactions, and similar arguments have been made in regards

to crowds (Reicher, 1996; 2000). Thus, through interpersonal interactions people can become empowered and gain some agency over their identities. An example comes from research into driving cessation in the elderly (Jetten & Pachana, 2012), where ex-drivers used social creativity strategies to reduce the importance of driving to their cognitive definition of a 'successful ager'. Through maintaining their social group memberships that they had prior to driving cessation, the ex-drivers had a context within which they could take agency over their own identity and modify its content, bringing their cognitive definitions of 'driver' and 'ex-driver' closer together through enacting a different 'ex-driver' identity from the one they feared would define them, leading to positive implications for their psychological health. Furthermore, Jaspal and Cinnirella (2010) have shown that people can change their perceptions of even the most seemly immutable identities (Islam) in order to tackle issues of identity compatibility, alleviating the negative consequences for well-being that arose for those who saw their identities as Muslim and gay as in conflict with each other.

The results from Papers 3 and 4 provide the basis for some exciting avenues of future research as well. For example, as both papers demonstrated that the built environment on both a micro- and macro-level can influence identity and group processes, and, as this thesis has also shown, these things are processes that change depending upon the surrounding context, interventions may be devised that promote group formation through simple physical designs. For example, providing an attractive area for residents of shared accommodation to use (Coley, Sullivan, & Kuo, 1997) could increase the use of communal areas and hence increase the residents' well-being. What's more, such a strategy could easily be applied to a larger, neighbourhood scale in order to promote community cohesion (Paper 3 & 4, Perkins, Florin, Rich, Wandersman, & Chavis, 1990; Speller, Lyons, & Twigger-Ross, 2002). A particularly interesting line of research could look at the minimum environmental cues that are necessary to create a group identity. For example, as Newman's (1973) work on defensible spaces suggested, simple symbolic markers in the physical environment could designate a shared communal space, and promote a sense of connection between people. Identifying simple yet effective mechanisms that can increase social interaction and hence promote group formation could, then, increase the well-being of residents in an affordable and effective way.

Final Conclusion

Through a series of studies, this thesis has shown that identity and group processes are influenced by the social, cultural, and physical context. In particular, it highlights the importance of differentiating between different types of social groups, and in incorporating the physical environment to the study of psychological processes. By demonstrating the effects of these different contexts, as well as emphasising the importance of social interactions, this thesis has opened up some interesting questions that future research should address. I hope I can continue to work towards answering some of these questions in the future.

BIBLIOGRAPHY

Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, 18, 317–334. doi:10.1002/ejsp.2420180403

Alesina, A., Devleeschauwer, A., Easterly, W., & Kurlat, S. (2003). Fractionalization. *Journal of Economic Growth*, *8*, 155–194.

Amiot, C. E., de la Sablonnière, R., Terry, D. J., & Smith, J. R. (2007). Integration of social identities in the self: toward a cognitive-developmental model. *Personality & Social Psychology Bulletin*, 11, 364–88. doi:10.1177/1088868307304091

Amiot, C. E., Terry, D. J., Wirawan, D., & Grice, T. A. (2010). Changes in social identities over time: the role of coping and adaptation processes. *British Journal of Social Psychology*, *49*, 803-26. doi:10.1348/014466609X480624

Ashmore, R. D., Deaux, K., & McLaughlin-Volpe. (2004). An organizing framework for collective identity: Articulation and significance of multidimensionality. *Psychological Bulletin, 130,* 80-114.

Badea, C., Jetten, J., Czukor, G., & Askevis-Leherpeux, F. (2010). The bases of identification: When optimal distinctiveness needs face social identity threat. *British Journal of Social Psychology*, *49*, 21-41.

Baray, G., Postmes, T., & Jetten, J. (2009). When I equals we: Exploring the relation between social and personal identity of extreme right-wing political party members. *British Journal of Social Psychology*, *48*, 625-647.

Barreto, M., & Ellemers, N. (2009). Multiple identities and the paradox of social inclusion. In F. Butera & J. M. Levine (Eds.), *Coping with minority status: Responses to exclusion and inclusion*, (pp. 269-292). Cambridge, UK: Cambridge University Press.

Barreto. M., Ellemers, N., Scholten, W., & Smith, H. (2010). To be or not to be: The impact of implicit versus explicit inappropriate social categorizations on the self. *The British Journal of Social Psychology, 49,* 43-67.

Baskerville, R. F. (2003). Hofstede never studied culture. *Accounting, Organizations and Society, 28,* 1–14. doi:10.1016/S0361-3682(01)00048-4

Baum, A., & Davis, G. E. (1980). Reducing the stress of high-density living: An architectural intervention. *Journal of Personality and Social Psychology, 38,* 471-481.

Baumeister, R. F. (1986). *Identity: Cultural change and the struggle for self*. Oxford University Press New York.

Baumeister, R. F. (1991). *Meanings of life*. New York: Guildford Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117,* 497-529.

Baumeister, R. F., & Sommer, K. L. (1997). What do men want? Gender differences and two spheres of belongingness: comment on Cross and Madson (1997). *Psychological Bulletin, 122,* 38-44.

Becker, M., Vignoles, V. L., Owe, E., Brown, R., Smith, P. B., Easterbrook, M., … & Yamakoğlu, N. (2012a). Culture and the distinctiveness motive: Constructing identity in individualistic and collectivistic contexts. *Journal of Personality and Social Psychology, 102,* 833-855. doi: 10.1037/a0026853

Becker, M., Vignoles, V. L., Owe, E., Brown, R., Smith, P. B., Easterbrook, M. … & Koller, S. (2012b). *Cultural bases of self-esteem: Seeing oneself positively in different cultural contexts.* Manuscript submitted for publication.

Bettencourt, B. A., Charlton, K., Eubanks, J., Kernahan, C., & Fuller, B. (1999). Development of collective self-esteem among students: Predicting adjustment to college. *Basic and Applied Social Psychology, 21,* 213–222. doi:10.1207/15324839951036380

Bettencourt, B. A., & Sheldon, K. M. (2001). Social roles as mechanisms for psychological need satisfaction within social groups. *Journal of Personality and Social Psychology, 81*, 1131–1143.

Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology, 3*, 27-52.

Birditt, K. S., & Antonucci, T. C. (2007). Relationship quality profiles and well-being among married adults. *Journal of Family Psychology, 21*, 595-604. doi:10.1037/0893-3200.21.4.595

Breakwell, G. M. (1987). Identity. In H. Beloff & A. Coleman (Eds.), *Psychological Survey* (Vol. 6, pp. 94–114). Leicester: British Psychological Society.

Breakwell, G. M. (1993). Social representations and social identity. *Papers on Social Representations, 2*, 1-20

Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality & Social Psychology Bulletin*, *17*, 475–482. doi:10.1177/0146167291175001

Brewer, M. B. (1999). The psychology of prejudice: Ingroup love and outgroup hate? *Journal of Social Issues, 55*, 429-444.

Brewer, M. B. (2001). The many faces of social identity: Implications for political psychology. *Political Psychology, 22*, 115–125. doi:10.1111/0162-895X.00229

Brewer, M. B., & Chen, Y. R. (2007). Where (who) are collectives in collectivism? Toward conceptual clarification of individualism and collectivism. *Psychological Review*, *114*, 133-151.

Brewer, M. B., & Pickett, C. L. (1999). Distinctiveness motives as a source of the social self. In T. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 71–87). New Jersey: Lawrence Erlbaum Associates Inc.

Brewer, M. B., & Roccas, S. (2001). Individual values, social identity, and optimal distinctiveness. In C. Sedikides & M. B. Brewer (Eds.), *Individual self, relational self, collective self* (pp. 219–240). Florence: Psychology Press.

Brislin, R. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*, 185-216.

Brown, R. (2011). *Prejudice: Its social psychology*. Wiley-Blackwell.

Burke, P. J., & Stets, J. E. (1999). Trust and commitment through self-verification. *Social Psychology Quarterly*, *62*, 347–366.

Cha, J. (1994). Aspects of individualism and collectivism in Korea. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and Collectivism* (pp. 276–292). Thousand Oaks, CA: Sage.

Chandler, M. J., Lalonde, C. E., Sokol, B., & Hallett, D. (2003). Personal persistence, identity development, and suicide: A study of Native and Non-Native North American adolescents. *Monographs of the Society for Research in Child Development, 68* (2, Serial No. 273.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, *9*, 233–255. doi:10.1207/S15328007SEM0902

Chiu, C.-Y., Gelfand, M. J., Yamagishi, T., Shteynberg, G., & Wan, C. (2010). Intersubjective Culture: The Role of Intersubjective Perceptions in Cross-Cultural Research. *Perspectives on Psychological Science*, *5*, 482–493. doi:10.1177/1745691610375562

Cinnirella, M. (1997). Towards a European identity? Interactions between the national and European social identities manifested by university students in Britain and Italy. *British Journal of Social Psychology*, *36*, 19–31.

Coley, R. L., Sullivan, W. C., & Kuo, F. E. (1997). Where does community grow? The social context created by nature in urban public housing. *Environment and Behaviour*, *29*, 468-494.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, *58*, 644-63.

Connidis, I. A. (1989). Siblings as Friends in Later Life. *American Behavioral Scientist*, 33, 81–93. doi:10.1177/0002764289033001008

Cooley, C. H. (1902). *Human nature and the social order*. New York: Scribner's.

Cushman, P. (1990). Why the self is empty: Toward a historically situated psychology. *American Psychologist, 45*, 599–611

Davidov, E., Schmidt, P., & Schwartz, S. H. (2008). Bringing values back in the adequacy of the European Social Survey to measure values in 20 countries. *Public Opinion Quarterly, 72*, 420-445.

De Leersnyder, J., Mesquita, B., & Kim, H. S. (2011). Where do my emotions belong? A study of immigrants' emotional acculturation. *Personality & Social Psychology Bulletin*, *37*, 451–63. doi:10.1177/0146167211399103

De Vries, H., Dijkstra, M., & Kuhlman, P. (1988). Self-efficacy: The third factor besides attitude and subjective norm as a predictor of behavioural intentions. *Health Education Research*, *3*, 273-282

Deaux, K., & Martin, D. (2003). Interpersonal networks and social categories: Specifying levels of context in identity processes. *Social Psychology Quarterly*, *66*, 101-117. doi:10.2307/1519842

Debies-Carl, J. S., & Huggins, C. M. (2009). "City air makes free": A multi-level, cross-national analysis of self-efficacy. *Social Psychology Quarterly, 72*, 343–364. doi:10.1177/019027250907200407

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227–268.

Devine-Wright, P., & Lyons, E. (1997). Remembering pasts and representing places: The construction of national identities in Ireland. *Journal of Environmental Psychology*, *17*, 33-45.

Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, *47*, 1105-17.

Dixon, J., & Durrheim, K. (2003). Contact and the ecology of racial division: Some varieties of informal segregation. *British Journal of Social Psychology, 42,* 1-23.

Drolet, A. L., & Morris, M. W. (2000). Rapport in Conflict Resolution: Accounting for How Face-to-Face Contact Fosters Mutual Cooperation in Mixed-Motive Conflicts. *Journal of Experimental Social Psychology, 36,* 26–50. doi:10.1006/jesp.1999.1395

Duckworth, A. L., Tsukayama, E., & May, H. (2010). Establishing causality using longitudinal hierarchical linear modeling: An illustration predicting achievement from self-control. *Social Psychological and Personality Science, 1,* 311-317. doi:10.1177/1948550609359707

Durkheim, E. (1964). *The Division of Labor in Society*. (G. Simpson, Trans.). New York: Free Press. (Original work published 1893).

Easterbrook, M., & Vignoles, V. L. (2012a). Different groups, different motives: Identity motives underlying changes in identification with novel groups. *Personality & Social Psychology Bulletin, 38,* 1066-1080. doi:10.1177/0146167212444614

Easterbrook, M., & Vignoles, V. L. (2012b). What does it mean to belong? Interpersonal bonds and intragroup similarities as predictors of felt belonging in different types of groups. *Manuscript submitted for publication.*

Easterbrook, M., Vignoles, V. L., Becker, M., Owe, E., Smith, P. B., Brown, R., … & Yamakoğlu, N. (2012). The generality of identity motives across cultures. Paper presented at the *IACCP 21st International Congress 2012, Stellenbosch, South Africa, July 17-21*.

Ebbesen, E., Kjos, G. L., & Konecni, V. J. (1976). Spatial ecology: Its effects on the choice of friends and enemies. *Journal of Experimental Social Psychology, 12,* 505–518. doi:10.1016/0022-1031(76)90030-5

Emmons, R. (1991). Personal strivings, daily life events, and psychological and physical well-being. *Journal of Personality, 49,*71-75.

Erikson, E. (1980). *Identity and the life cycle*. New York, NY. Norton.

Ethier, K. A., & Deaux, K. (1994). Negotiating social identity when contexts change: Maintaining identification and responding to threat. *Journal of Personality and Social Psychology, 67*, 243-251.

Evans, G. W. (2003). The built environment and mental health. *Journal of Urban Health, 80,* 536-555.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117-140.

Festinger, L., Schachter, S., & Back, K. (1950). *Social pressures in informal groups: A study of human factors in housing.* Stanford: Stanford University Press.

Firebaugh, G. (1980). Groups as contexts and frog ponds. In K. H. Roberts & L. Burstein (Eds.), *Issues in aggregation* (pp. 43–52). San Francisco, CA: Jossey-Bass.

Fischer, C. S. (1973). On urban alienations and anomie: Powerlessness and social isolation. *American Sociological Review*, *32*, 326–331.

Fischer, R. (2004). Standardization to Account for Cross-Cultural Response Bias: A Classification of Score Adjustment Procedures and Review of Research in JCCP. *Journal of Cross-Cultural Psychology*, *35*, 263–282. doi:10.1177/0022022104264122

Fischer, R. (2011). Value Isomorphism in the European Social Survey: Exploration of Meaning Shifts in Values Across Levels. *Journal of Cross-Cultural Psychology*. doi:10.1177/0022022111413276

Freeman, M. A. (1997). Demographic Correlates of Individualism and Collectivism: A Study of Social Values in Sri Lanka. *Journal of Cross-Cultural Psychology*, *28*, 321–341. doi:10.1177/0022022197283007

Fromkin, H. L. (1970). Effects of experimentally aroused feelings of undistinctiveness upon valuation of scarce and novel experiences. *Journal of Personality and Social Psychology*, *16*, 521–9.

Fromkin, H. L. (1972). Feelings of interpersonal undistinctiveness: An unpleasant affective state. *Journal of Experimental Research in Personality*. *6*, 178-185.

Gardner, W. L., Pickett, C. L., & Brewer, M. B. (2000). Social exclusion and selective memory: How the need to belong influences memory for social events. *Personality and Social Psychology Bulletin, 26*, 486-496. doi:10.1177/0146167200266007

Georgas, J. (1989). Changing Family Values in Greece: From Collectivist to Individualist. *Journal of Cross-Cultural Psychology*, *20*, 80–91. doi:10.1177/0022022189201005

Gonnerman Jr, M. E., Parker, C. P., Lavine, H., & Huff, J. (2000). The relationship between self-discrepancies and affective states: The moderating roles of self-monitoring and standpoints on the self. *Personality and Social Psychology Bulletin*, *26*, 810-819.

Greenbaum, S. D. (1982). Bridging ties at the neighbourhood level. *Social Networks*, *4*, 367-384.

Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, *35*, 603-618.

Gregg, A. P., Sedikides, C., & Gebauer, J. E. (2011). Dynamics of identity: Between self-enhancement and self-assessment. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 305-328). New York: Springer.

Hamilton, D. L., & Sherman, S. J. (1996). Perceiving persons and groups. *Psychological Review*, *103*, 336-55.

Harb, C., & Smith, P. B. (2008). Self-construals across cultures: Beyond independence--interdependence. *Journal of Cross-Cultural Psychology*, *39*, 178-197. doi:10.1177/0022022107313861

Haslam, C., Haslam, S. A., Jetten, J., Bevins, A., Ravenscroft, S., & Tonks, J. (2010). The social treatment: the benefits of group interventions in residential care settings. *Psychology and aging, 25,* 157–67. doi:10.1037/a0018256

Haslam, S. A., Turner, J. C., Oakes, P. J., McGarty, C., & Hayes, B. K. (1992). Context-dependent variation in social stereotyping: The effects of intergroup relations as mediated by social change and frame of reference. *European Journal of Social Psychology*, *22*, 3-20.

Hays, R. B. (1984). The development and maintenance of friendship. *Journal of Social and Personal Relationships*, *1,* 75-98. doi:10.1177/0265407584011005

Hays, R. B., & Oxley, D. (1986). Social network development and functioning during a life transition. *Journal of Personality and Social Psychology, 50,* 305-313.

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review, 106,* 776-794.

Heine, S. J., Lehman, D. R., Peng, K., & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales?: The reference-group effect. *Journal of Personality and Social Psychology*, *82*, 903–918. doi:10.1037//0022-3514.82.6.903

Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: on the coherence of social motivations. *Personality and Social Psychology Review*, *10*, 88–110. doi:10.1207/s15327957pspr1002_1

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review*, *94*, 319-340.

Higgins, E. T. (1989). Self-discrepancy theory: What patterns of self-beliefs cause people to suffer. *Advances in Experimental Social Psychology*, *22*, 93-136.

Hofmann, D. A., & Gavin, M. B. (1998). Centering Decisions in Hierarchical Linear Models: Implications for Research in Organizations. *Journal of Management*, *24*, 623–641. doi:10.1177/014920639802400504

Hofstede, G. (1980). *Cultures consequences: International differences in work-related values*. London: Sage.

Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology, 11*, 223–255. doi:10.1080/14792772043000040

Hogg, M. A., CooperShaw, L., & Holzworth, D. W. (1993). Group prototypically and depersonalized attraction in small interactive groups. *Personality and Social Psychology Bulletin, 19*, 452-465. doi:10.1177/0146167293194010

Hogg, M. A., & Hains, S. C. (1996). Intergroup relations and group solidarity: Effects of group identification and social beliefs on depersonalized attraction. *Journal of Personality and Social Psychology, 70*, 295-309. doi:10.1037//0022-3514.70.2.295

Hogg, M. A., Siegel, J. T., & Hohman, Z. P. (2011). Groups can jeopardize your health: Identifying with unhealthy groups to reduce self-uncertainty. *Self and Identity, 10*, 326–335. doi:10.1080/15298868.2011.558762

Hornsey, M. J., & Hogg, M. A. (2000). Subgroup relations: A comparison of mutual intergroup differentiation and common ingroup identity models of prejudice reduction. *Personality and Social Psychology Bulletin, 26*, 242-256. doi:10.1177/0146167200264010

Hornsey, M. J., & Jetten, J. (2004). The individual within the group: balancing the need to belong with the need to be different. *Personality and Social Psychology Review, 8*, 248-64. doi:10.1207/s15327957pspr0803_2

House, R. J., & Javidan, M. (2004). Overview of GLOBE. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBE study of 62 societies.* (pp. 9–28). Sage: Thousand Oaks, CA.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage Publications, Inc.

Hox, J. J. (2002). *Multilevel analysis: Techniques and applications* (Second Edi.). Hove: Routledge.

Hoyle, R. H., Kernis, M. H., Leary, M. R., & Baldwin, M. W. (1999). *Selfhood: Identity, esteem, regulation*. Westview Press.

Huntington, S. (1996). *The clash of civilizations and the remaking of world order*. New York, NY. Simon & Schuster, Inc.

Iyer, A., & Jetten, J. (2011). What's left behind: Identity continuity moderates the effect of nostalgia on well-being and life choices. *Journal of Personality and Social Psychology, 101*, 94-108. doi:10.1037/a0022496

Iyer, A., Jetten, J., Tsivrikos, D., Postmes, T., & Haslam, S. A. (2009). The more (and the more compatible) the merrier: multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *The British Journal of Social Psychology, 48*, 707-33. doi:10.1348/014466608X397628

James, W. (1980). *The principles of psychology (Volume 1).* London: Dover. (Original work published 1980).

Jans, L., Postmes, T., & Van der Zee, K. I. (2011). The induction of shared identity: The positive role of individual distinctiveness for groups. *Personality & Social Psychology Bulletin*. doi:10.1177/0146167211407342

Jaspal, R., & Cinnirella, M. (2010). Coping with potentially incompatible identities: Accounts of religious, ethnic, and sexual identities from British Pakistani men who identify as Muslim and gay. *British Journal of Social Psychology, 49,* 849-870.

Javidan, M., House, R. J., Dorfman, P. W., Hanges, P. J., & Sully de Luque, M. (2006). Conceptualizing and measuring cultures and their consequences: a comparative review of GLOBE's and Hofstede's approaches. *Journal of International Business Studies, 37*, 897–914. doi:10.1057/palgrave.jibs.8400234

Jetten, J., Iyer, A., Tsivrikos, D., & Young, B. M. (2008). When is individual mobility costly? The role of economic and social identity factors. *European Journal of Social Psychology, 879,* 866-879. doi:10.1002/ejsp

Jetten, J., O'Brien, A., & Trindall, N. (2002). Changing identity: Predicting adjustment to organizational restructure as a function of subgroup and superordinate identification. *British Journal of Social Psychology*, *41*, 281-297. doi:10.1348/014466602760060147

Jetten, J., & Pachana, N. (2012). Not wanting to grow old: Using a social identity model of identity change (SIMIC) to understand the impact of driving cessation in older adults. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The Social Cure: Identity, Health and Well-Being* (pp. 97-113). Hove: Psychology Press.

Jetten, J., Spears, R., & Postmes, T. (2004). Intergroup distinctiveness and differentiation: a meta-analytic integration. *Journal of Personality and Social Psychology*, *86*, 862–79. doi:10.1037/0022-3514.86.6.862

Jetten, J., Summerville, N., Hornsey, M. J., & Mewse, A. J. (2005). When differences matter: intergroup distinctiveness and the evaluation of impostors. *European Journal of Social Psychology*, *35*, 609–620. doi:10.1002/ejsp.282

Johnson, A. L., Crawford, M. T., Sherman, S. J., Rutchick, A. M., Hamilton, D. L., Ferreira, M. B., & Petrocelli, J. V. (2006). A functional perspective on group memberships: Differential need fulfillment in a group typology. *Journal of Experimental Social Psychology*, *42*, 707-719.

Jones, J. M., & Jetten, J. (2011). Recovering From Strain and Enduring Pain. *Social Psychological and Personality Science*, *2*, 239-244.

Kasarda, J., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review*, *39*, 328–339.

Kashima, Y. (2000). Maintaining cultural stereotypes in the serial reproduction of narratives. *Personality and Social Psychology Bulletin*, *26*, 594-604.

Kashima, Y., Kokubo, T., Kashima, E. S., Boxall, D., Yamaguchi, S., & Macrae, K. (2004). Culture and self: are there within-culture differences in self between metropolitan areas and regional cities? *Personality & Social Psychology Bulletin*, *30*, 816–23. doi:10.1177/0146167203261997

King, A., & Bond, M. (1985). *The Confucian paradigm of man: A sociological view. Chinese culture and mental health.* Orlando, FL. Academic Press.

Kitayama, S., Ishii, K., Imada, T., Takemura, K., & Ramaswamy, J. (2006). Voluntary settlement and the spirit of independence: evidence from Japan's "Northern frontier". *Journal of Personality and Social Psychology*, *91*, 369–84. doi:10.1037/0022-3514.91.3.369

Kitayama, S., Markus, H. R., & Kurokawa, M. (2000). Culture, Emotion, and Well-being: Good Feelings in Japan and the United States. *Cognition & Emotion*, *14*, 93–124. doi:10.1080/026999300379003

Kline, R. (2005). *Principles and Practices of Structural Equation Modelling* (2nd ed.). Guildford: New York.

Kline, S., & Stafford, L. (2004). A comparison of interaction rules and interaction frequency in relationship to marital quality. *Communication Reports, 17*, 37-41.

Kuo, F. E., Sullivan, W. C., Coley, R. L., & Brunson, L. (1998). Fertile ground for community: Inner-city neighbourhood common spaces. *American Journal of Community Psychology*, *26*, 823-851.

Leach, C. W., Zebel, S., Vliek, M. L. W., van Zomeren, M., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, *95*, 144-165.

Leary, M. R. (1990). Responses to social exclusion: Social anxiety, jealousy, loneliness, depression, and low self-esteem. *Journal of Social and Clinical Psychology*, *9*, 221-229.

Leonardelli, G. J., Pickett, C. L., & Brewer, M. B. (2010). Optimal distinctiveness theory: A framework for social identity , social cognition , and intergroup relations. *Advances in Experimental Social Psychology* (Vol. 43, pp. 63-113). San Diego, Academic Press.

Lewin, K. (1939). Field theory and experiment in social psychology: Concepts and methods. *American Journal of Sociology, 44,* 868-896.

Leyens, J. P., Yzerbyt, V. Y., & Rogier, A. (1997). Personality traits that distinguish you and me are better memorized. *European Journal of Social Psychology*, *27*, 511–522. doi:10.1002/(SICI)1099-0992(199709/10)27:5<511::AID-EJSP827>3.3.CO;2-Z

Lickel, B., Hamilton, D. L., & Sherman, S. J. (2001). Elements of a lay theory of groups: Types of groups, relational styles, and the perception of group entitativity. *Personality & Social Psychology Bulletin*, *5*, 129-140. doi:10.1207/S15327957PSPR0502_4

Lickel, B., Hamilton, D. L., Wieczorkowska, G., Lewis, A., Sherman, S. J., & Uhles, A. N. (2000). Varieties of groups and the perception of group entitativity. *Journal of Personality and Social Psychology*, *78,* 223–246. doi:10.1037//0022-3514.78.2.223

Little, T.D., Card, N.A., Slegers, D., & Ledford, E. (2007). Representing contextual factors in multiple-group MACS models. In T.D. Little, J.A. Bovaird, & N.A. Card (Eds.), *Modelling contextual effects in longitudinal studies*. Mahwah, NJ: Erlbaum.

Livingstone, A., Haslam, S. A., Postmes, T., & Jetten, J. (2011). "We are, therefore we should": Evidence that in-group identification mediates the acquisition of in-group norms. *Journal of Applied Social Psychology*, *41*, 1857–1876.

Lo, C., Helwig, C. C., Chen, S. X., Ohashi, M. M., & Cheng, C. M. (2011). A needs-based perspective on cultural differences in identity formation. *Identity*, *11*, 211–230.

Lynn, M., & Snyder, C. (2002). Uniqueness seeking. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology (pp. 395-410).* New York, NY: Oxford University Press.

Ma, V., & Schoeneman, T. J. (1997). Individualism Versus Collectivism: A Comparison of Kenyan and American Self-Concepts. *Basic and Applied Social Psychology, 19,* 261–273. doi:10.1207/s15324834basp1902_7

MacDonald, G., & Leary, M. R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin, 131,* 202-223.

Marková, I. (1987). Knowledge of the self through interaction. In K. Yardley & T. Honess (Eds.), *Self and identity: Psychosocial perspectives* (pp. 65-80). New York: Wiley.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224-253.

Markus, H. R., & Kunda, Z. (1986). Stability and malleability of the self-concept. *Journal of Personality and Social Psychology, 51,* 858–66.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38,* 299-337.

Marsh, K. L., Johnston, L., Richardson, M. J., & Schmidt, R. C. (2009). Toward a radically embodied, embedded social psychology. *European Journal of Social Psychology, 39,* 1217-1225. doi:10.1002/ejsp

Maslow, A. H. (1970). *Motivation and personality*. New York: Harper & Row.

McGuire, W. J., & Padawer-Singer, A. (1976). Trait salience in the spontaneous self-concept. *Journal of Personality and Social Psychology, 33,* 743–54.

McNamara, S., & Connell, J. (2008). Homeward bound? Searching for home in inner Sydney's share houses. *Australian Geographer, 38,* ,71-91.

Mead, G. H. (1934). Mind, self, and society from the standpoint of a social behaviourist (CW Morris, Ed.). *Chicago: University of Chicago*.

Minkov, M., & Hofstede, G. (2012). Is National Culture a Meaningful Concept? Cultural Values Delineate Homogeneous National Clusters of In-Country Regions. *Cross-Cultural Research, 46,* 133-159. doi:10.1177/1069397111427262

Mishra, R. (1994). Individualist and collectivist orientations across generations. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and Collectivism* (pp. 225–238). Thousand Oaks, CA: Sage.

Morrison, K. R., & Matthes, J. (2011). Socially motivated projection: Need to belong increases perceived opinion consensus on important issues. *European Journal of Social Psychology*, *41*, 707–719. doi:10.1002/ejsp.797

Muthén, B. O. (1994). Multilevel covariance structure analysis. *Sociological Methods & Research*, *22*, 376-398. doi:10.1177/0049124194022003006

Muthén, L. K., & Muthén, B. O. (1998-2010). *MPLUS user's guide. sixth edition.* Los Angeles, CA: Muthén & Muthén.

National Landlords Association. (2012). Shared housing. Retrieved from http://www.landlords.org.uk/news-campaigns/campaigns/shared-housing.

Newman, O. (1973). *Defensible space*. London: Architectural Press.

Novelli, D., Drury, J., & Reicher, S. (2010). Come together: two studies concerning the impact of group relations on personal space. *British Journal of Social Psychology*, *49*, 223-36. doi:10.1348/014466609X449377

Owe, E., Vignoles, V. L., Becker, M., Brown, R., Smith, P. B., Lee, S. W. S., Easterbrook, M., … Jala, B. (2012). Contextualism as an Important Facet of Individualism-Collectivism: Personhood Beliefs Across 37 National Groups. *Journal of Cross-Cultural Psychology*. doi:10.1177/0022022111430255

Owe, E., Vignoles, V. L., Becker, M., Smith, P. B., Easterbrook, M., Brown, R., … Brambilla, M. (2012). Beyond West vs. East: Culture and Self-construals across 38 nations. *Manuscript submitted for publication.*

Ozaki, R. (2002). Housing as a reflection of culture: privatized living and privacy in England and Japan. *Housing Studies, 17,* 209-227. doi:10.1080/0267303022012319

Ozaki, R. (2003). The "front" and "back" regions of the English house: changing values and lifestyles. *Journal of Housing and the Built Environment 18,* 105-127.

Paccagnella, O. (2006). Centering or not centering in multilevel models? The role of the group mean and the assessment of group effects. *Evaluation Review, 30,* 66-89.

Perkins, D. D., Florin, P., Rich, R. C., Wandersman, A., & Chavis, D. M. (1990). Participation and the social and physical environment of residential blocks: Crime and community context. *American Journal of Community Psychology*, *18,* 83-115. doi:10.1007/BF00922690

Pettigrew, T., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90,* 751–83. doi:10.1037/0022-3514.90.5.751

Pettigrew, T., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, *38*, 922–934. doi:10.1002/ejsp

Pickett, C. L., Bonner, B. L., & Coleman, J. M. (2002). Motivated self-stereotyping: heightened assimilation and differentiation needs result in increased levels of positive and negative self-stereotyping. *Journal of Personality and Social Psychology*, *82*, 543-562.

Pickett, C. L., & Brewer, M. B. (2001). Assimilation and differentiation needs as motivational determinants of perceived in-group and out-group homogeneity.

Journal of Experimental Social Psychology, *37*, 341–348. doi:10.1006/jesp.2000.1469

Pickett, C. L., Silver, M. D., & Brewer, M. B. (2002). The impact of assimilation and differentiation needs on perceived group importance and judgments of ingroup size. *Personality and Social Psychology Bulletin, 28,* 546-558.

Plaut, V. C., Markus, H. R., Treadway, J. R., & Fu, A. S. (2012). The cultural construction of self and well-being A Tale of Two Cities. *Personality and Social Psychology Bulletin, 38,* 1644-1658.

Population Reference Bureau (2011). Percentage of population in urban areas. Retrieved from http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=12. *World Population Data Sheet*.

Postmes, T., Haslam, S. A., & Swaab, R. (2005). Social influence in small groups: An interactive model of social identity formation. *European Review of Social Psychology*, *16,* 1-42. doi:10.1080/10463280440000062

Postmes, T., Spears, R., Lee, A. T., & Novak, R. J. (2005). Individuality and social influence in groups: inductive and deductive routes to group identity. *Journal of Personality and Social Psychology, 89,* 747-763.

Prentice, D. A., Miller, D. T., & Lightdale, J. R. (1994). Asymmetries in attachments to groups and to their members: Distinguishing between common-identity and common-bond groups. *Personality & Social Psychology Bulletin*, *20,* 484-493. doi:10.1177/0146167294205005

Proulx, T., & Heine, S. J. (2007). Death and Black Diamonds: Meaning, Mortality, and the Meaning Maintenance Model. *Psychological Inquiry, 17*, 309–318. doi:10.1080/10478400701366985

Rasbash, J., Browne, W., Healy, M., Cameron, B., & Charlton, C. (2010). MLwiN version 2.23 [Computer software]. Centre for multilevel modelling; University of Bristol.

Rasbash, J., Browne, W., Healy, M., Cameron, B., & Charlton, C. (2012). MLwiN version 2.25 [Computer software]. Centre for multilevel modelling; University of Bristol.

Raudenbush, S. W. (1989). Centering predictors in multilevel analysis: Choices and consequences. *Multilevel modelling newsletter*, *1*, 10–12.

Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2004). HLM 6 for Windows [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc.

Reicher, S. (1996). 'The Battle of Westminster': Developing the social identity model of crowd behaviour in order to explain the initiation and development of collective conflict. *European Journal of Social Psychology, 26,* 115-134.

Reicher, S. (2000). Social identity definition and enactment: A broad SIDE against irrationalism and relativism. In T. Postmes, R. Spears, M. Lea. & S. Reicher (Eds.). *SIDE issues centre stage: Recent developments in studies of de-individuation in groups* (pp. 175-190). Amsterdam: Royal Netherlands Academy of Arts and Sciences.

Reis, H. T., Sheldon, K. M., Gable, S. T., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin, 26*, 419-435.

Reynolds, K. J., Turner, J.C., Branscombe, N. R., Mavor, K. I., Bizumic, B., & Subasic, E. (2012) Social identity and personality processes: Non-Aboriginal Australian identity and neuroticism *European Journal of Social Psychology*, *42*, 252-262.

Ruble, D. N., & Seidman, E. (1996). Social transitions: Windows into social psychological processes. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles.* (pp. 830-856). New York: Guildford Press.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, *55*, 68–78.

Ryan, R. M., & Deci, E. L. (2003). On assimilating identities to the self: A self-determination theory perspective on internalization and integrity within cultures. In M. R. Leary & J. P. Tangney (Eds.). *Handbook of Self and Identity* (pp. 253–272). New York: Guilford.

Sani, F. (2012). Group identification, social relationships, and health. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The Social Cure: Identity, Health and Well-Being* (pp. 21-38). Hove: Psychology Press.

Sani, F., Bowe, M., Herrera, M., Manna, C., Cossa, T., Miao, X., & Zhou, Y. (2007). Perceived collective continuity: Seeing groups as entities that move through time. *European Journal of Social Psychology*, *37*, 1118-1134.

Sassen, S. (1988). Globalization and its discontents: Essays on the new mobility of people and money.

Sassenberg, K. (2002). Common bond and common identity groups on the Internet: Attachment and normative behavior in on-topic and off-topic chats. *Group Dynamics: Theory, Research, and Practice, 6*, 27–37. doi:10.1037//1089-2699.6.1.27

Satorra, A., & Bentler, P. M. (1999). A scaled difference chi-squared test statistic for moment structure analysis. *UCLA statistics reprint*. Retrieved from http://statistics.ucla.edu/preprints/uclastat-preprint-1999:19

Schellenberg, J. A. (1978). *Masters of social psychology: Freud, Mead, Lewin, and Skinner*. Oxford University Press.

Schlenker, B. R. (2003). Self-presentation. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 492-518). New York: Guilford Press.

Schwartz, S. H. (2007). Value orientations: Measurement, antecedents and consequences across nations. In R. Jowell, R. Roberts, R. Fitzgerald, & G. Eva (Eds.), *Measuring attitudes cross-nationally: Lessons from the European Social Survey.* (pp. 161–193). London: Sage.

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology*, *84*, 60-79.

Serpe, R. T., & Stryker, S. (2011). The symbolic interactionist perspective and identity theory. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 225–248). New York: Springer.

Sheldon, K. M., & Bettencourt, B. A. (2002). Psychological need-satisfaction and subjective well-being within social groups. *The British Journal of Social Psychology*, 41, 25–38.

Sherman, S. J., Castelli, L., & Hamilton, D. L. (2002). The spontaneous use of a group typology as an organizing principle in memory. *Journal of Personality and Social Psychology, 82*, 328–342. doi:10.1037//0022-3514.82.3.328

Simmel, G. (1957). The Metropolis and Mental Life. In P. K. Hatt & A. J. Reiss (Eds.), *Cities and Societies*. New York, NY: Free Press.

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modelling change and event occurrence*. Oxford: Oxford University Press.

Smith, P. B. (2004). Acquiescent Response Bias as an Aspect of Cultural Communication Style. *Journal of Cross-Cultural Psychology*, *35*, 50–61. doi:10.1177/0022022103260380

Smith, P. B. (2006). When elephants fight, the grass gets trampled: the GLOBE and Hofstede projects. *Journal of International Business Studies*, *37*, 915–921.

Snyder, C. R., & Fromkin, H. L. (1980). *Uniqueness: The Human Pursuit of Difference*. New York: Plenum.

Spears, R. (2011). Group identities: The social identity perspective. In K. Luyckx, S. J. Schwartz, & V. L. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 201-204). New York: Springer.

Spears, R., Doosje, B., & Ellemers, N. (1997). Self-stereotyping in the face of threats to group status and distinctiveness: The role of group identification. *Personality and Social Psychology Bulletin, 23*, 538-553.

Speller, G., Lyons, E., & Twigger-Ross, C. (2002). A community in transition: The relationship between spatial change and identity processes. *Social Psychological Review*, *4*, 39-58.

Steinel, W., Van Kleef, G. A., Van Knippenberg, D., Hogg, M. A., Homan, A. C., & Moffitt, G. (2010). How intragroup dynamics affect behaviour in intergroup conflict: The role of group norms, prototypicality, and need to belong. *Group Processes & Intergroup Relations*, *13*, 779–794. doi:10.1177/1368430210375702

Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly*, 63, 224–237.

Stott, C., & Drury, J. (2004). The importance of social structure and social interaction in stereotype consensus and content: Is the whole greater than the sum of its parts?. *European Journal of Social Psychology*, *34*, 11-23.

Stryker, S. (1980). *Symbolic interactionism: A social structural version*. Menlow Park, CA.: Cummings

Swann, W. B., & Read, S. (1981). Self-verification processes: How we sustain our self-conceptions. *Journal of Experimental Social Psychology*, *17*, 351–372.

Swann, W. B., Gómez, A., Seyle, D. C., Morales, J., & Huici, C. (2009). Identity fusion: the interplay of personal and social identities in extreme group behavior. *Journal of Personality and Social Psychology*, *96*, 995-1101.

Swann, W. B., Pelham, B. W., & Krull, D. S. (1989). Agreeable fancy or disagreeable truth? Reconciling self-enhancement and self-verification. *Journal of Personality and Social Psychology, 57,* 782–791.

Swann, W. B., Rentfrow, P. J., & Guinn, J. S. (2003). Self-verification: The search for coherence. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 367–383). New York, NY: Guilford Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.). *Psychology of Intergroup Relations* (pp. 2–24). Nelson-Hall.

Taylor, C. (1989). *Sources of the self: The making of the modern identity*. Cambridge: Cambridge University Press.

Tönnies, F. (1957). *Community and Society*. (C. P. Loomis, Trans.). New York: Harper Tourchbooks. (Original works published 1887).

Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview.

Tung, R. L. (2007). The cross-cultural research imperative: The need to balance cross-national and intra-national diversity. *Journal of International Business Studies*, *39*, 41-46.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S., & Wetherell, M. (1987). *Rediscovering the social group: A self-categorization theory. Handbook of Theories of Social Psychology: Volume Two*. Oxford: Basil Blackwell Ltd.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and social psychology bulletin*, *20*, 454-454.

Van de Vliert, E., Schwartz, S. H., Huismans, S. E., Hofstede, G., & Daan, S. (1999). Temperature, cultural masculinity, and domestic political violence. *Journal of Cross-Cultural Psychology*, *30*, 291–314.

van Rijswijk, W., Haslam, S. A., & Ellemers, N. (2006). Who do we think we are? The effects of social context and social identification on in-group stereotyping. *The British Journal of Social Psychology*, *45*, 161–74. doi:10.1348/014466605X39475

Vandello, J. A., & Cohen, D. (1999). Patterns of individualism and collectivism across the United States. *Journal of Personality and Social Psychology*, *77*, 279–292. doi:10.1037//0022-3514.77.2.279

Vignoles, V. L. (2009). The motive for distinctiveness: A universal, but flexible human need. In C. R. Snyder & S. Lopez (Eds.), *Oxford Handbook or Positive Psychology* (2nd ed., pp. 491–499). New York: Oxford University Press.

Vignoles, V. L. (2011). Identity motives. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 402-433). New York: Springer.

Vignoles, V. L., Abuhamdeh, S., Aldhafri, S., Amponsah, B., Ayala, B. C., Baguma, P., … & Yamakoğlu, N. (2011). *Identity motives in cultural context: An introduction*. Paper presented at the *International Association of Cross Cultural Psychology regional conference. Istanbul, Turkey, June 28-July 3*

Vignoles, V. L., Chryssochoou, X., & Breakwell, G. M. (2000). The distinctiveness principle: Identity, meaning, and the bounds of cultural relativity. *Personality & Social Psychology Bulletin, 4,* 337–354. doi:10.1207/S15327957PSPR0404_4

Vignoles, V. L., Chryssochoou, X., & Breakwell, G. M. (2002). Sources of distinctiveness: position, difference and separateness in the identities of Anglican parish priests. *European journal of Social Psychology*, *32*, 761–780. doi:10.1002/ejsp.119

Vignoles, V. L., Manzi, C., Regalia, C., Jemmolo, S., & Scabini, E. (2008). Identity motives underlying desired and feared possible future selves. *Journal of Personality*, 76, 1165–1200. doi:10.1111/j.1467-6494.2008.00518.x

Vignoles, V. L., & Moncaster, N. J. (2007). Identity motives and in-group favouritism: A new approach to individual differences in intergroup discrimination. *British Journal of Social Psychology*, *46*, 91-113.

Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: influence of multiple motives on identity construction. *Journal of Personality and Social Psychology*, *90*, 308–33. doi:10.1037/0022-3514.90.2.308

Vignoles, V. L., Schwartz, S. J., & Luyckx, K. (2011). Introduction: Toward an integrated view of identity. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles

(Eds.), *Handbook of Identity Theory and Research* (pp. 1-31). New York: Springer.

Wallace, H., Ngo, T. A., & Russak, D. (2011). Psychological predictors and outcomes of isolating home preferences. Poster presented at *the SPSP 2011 Annual Meeting, San Antonio, Texas, January 27-29.*

Whitton, S. W., & Kuryluk, A. D. (2012). Relationship satisfaction and depressive symptoms in emerging adults: Cross-sectional associations and moderating effects of relationship characteristics. *Journal of Family Psychology*, *26*, 226-235. doi:10.1037/a0027267

Wiggins, D. (2001). *Sameness and substance renewed*. Cambridge: Cambridge University Press.

Wilder, D., & Simon, A. (1998). Categorical and dynamic groups: Implications for social perception and intergroup behaviour. In C. Sedikides, J. Schopler, & C. A. Insko (Eds.), *Intergroup Cognition and Intergroup Behaviour* (pp. 27-44). New Jersey: Lawrence Erlbaum Associates Inc.

Wirth, L. (1938). Urbanism as a way of life. *American Journal of Sociology, 44*, 1–24.

World Bank. (2010). GNI per capita 2009, Atlas method. Retrieved from http://www.damtp.cam.ac.uk/user/na/FoCM11/GNIPC.pdf.

Yamagishi, T. (2010). Micro-Macro Dynamics of the Cultural Construction of Reality: A Niche Construction Approach to Culture. In M. J. Gelfand, C.-Y. Chiu, & Y.-Y. Hong (Eds.), *Advances in Culture Psychology* (pp. 251–308). Oxford, England: Oxford University Press.

Yamagishi, T., Hashimoto, H., Li, Y., & Schug, J. (2012). Stadtluft Macht Frei (City Air Brings Freedom). *Journal of Cross-Cultural Psychology, 43,* 38-45. doi:10.1177/0022022111415407

Yuki, M. (2003). Intergroup comparison versus intragroup relationships: A cross-cultural examination of social identity theory in North American and East Asian cultural contexts. *Social Psychology Quarterly*, *66*, 166-183.

Yuki, M. (2011). Intragroup relationships and intergroup comparisons as two sources of group-based collectivism. In R.M. Kramer, G.J. Leonardelli, & R.W. Livingston (Eds.), *Social cognition, social identity, and intergroup relations: A Festschrift in honor of Marilynn Brewer* (pp. 247-266). New York: Taylor & Francis.

APPENDIX 1

The questionnaire below has been reproduced from the original online version, which was the materials used for the study reported in Papers 1 and 3.

QUESTIONNAIRE:

ALL TIME POINTS:

Where you live.

Please complete the item 'I am a resident of' with the name of the residences where you live on campus, such as Lewes Court or Kent House.

Please complete the item 'Flat' with the number of the flat that contains your bedroom.

If you live in either Kent House, Lancaster House, Norwich House, or York House, please provide the number of the floor that your bedroom is on.

Once you have done this, please click 'continue' and answer the following questions. Please do NOT click 'back' on your web browser or press the 'backspace' key at any time during the questionnaire.

1. I am a resident of_____

2. Flat _____

[As appropriate, the residences and flat numbers were automatically inserted into the following questions, signified by "___"].

(0-10 scale; Not at all … moderately … Extremely)

How important is being a resident of ___ in defining who you are?
How important is being a member of flat ___in defining who you are?
How happy or unhappy do you feel about being a resident of ___
How happy or unhappy do you feel about being a member of flat ___
How much do you like people to know you are a resident of ___
How much do you like people to know you are a member of flat ___
How often do you think about the fact that you are a resident of ___
How often do you think about the fact that you are a member of flat___?
How loyal do you feel towards ___
How loyal do you feel towards flat ___
How central or marginal is being a resident of ___to your sense of who you are?
How central or marginal is being a member of flat ___to your sense of who you are?
How often do you show or tell people you are a resident ___of in your everyday actions?
How often do you show or tell people you are a member of flat ___in your everyday actions?
How much does being a member of flat (or floor) ___give you a sense that your life is meaningful?
How much does being a member of flat (or floor) ___give you a sense that you "belong" - that you are included among or accepted by people who matter to you?
How much does being a member of flat (or floor) ___make you see yourself positively?
How much does being a member of flat (or floor) ___make you feel that your past present and future are connected?
How much do you feel that being a member of flat (or floor) ___distinguishes you - in any sense - from other people?
How much does being a member of flat (or floor) ___make you feel confident and capable?
How much does being a member of flat (or floor) ___ create any sort of boundary between yourself and others?
How much does being a member of flat (or floor) ___ make you feel different from others in terms of your personal characteristics?
How much does being a member of flat (or floor) ___give you a particular role or position in relation to others?
How close do you feel to the other members of flat (or floor) ___?
How sociable are you with the people who live in flat (or floor) ___?
How similar do you feel to the average person who lives in flat (or floor) ___ ?
How much do your flatmates benefit from you being a member of flat (or floor) __ ?
How easy do you think it would be to move in or move out of flat (or floor) ___?
How much do you feel that the all the flatmates in flat (or floor) ___have the same opportunities and/or external pressures on them as each other?
How much do you feel that flat (or floor) ___has a positive social status compared to other flats (or floors) here on campus?
How included do you feel within flat (or floor) ___?
How much do the flatmates in flat (or floor) ___depend upon each other?
How much do the flatmates in flat (or floor) ___share the same goals and ambitions with each other?
How well do you know the other residents in flat (or floor) ___?

How much of a sense of harmony is there within flat (or floor) ___?
How similar do you feel the members of flat (or floor) ___are to each other?
How much does being a resident of ___give you a sense that your life is meaningful?
How much does being a resident of ___ give you a sense that you "belong" - that you are included among or accepted by people who matter to you?
How much does being a resident of ___make you see yourself positively?
How much does being a resident of ___ make you feel that your past present and future are connected?
How much do you feel that being a resident of___ distinguishes you - in any sense - from other people?
How much does being a resident of ___make you feel confident and capable?
How much does being a resident of___ create any sort of boundary between yourself and others?
How much does being resident of ___make you feel different from others in terms of your personal characteristics?
How much does being a resident of ___give you a particular role or position in relation to others?
How close do you feel to the other residents of ___?
How sociable are you with the people who live in ___?
How similar do you feel to the average person who lives in ___?
How much do the other residents of___ benefit from you being a resident of ___?
How easy do you think it would be to move in or move out of ___?
How much do you feel that all the residents of ___have the same opportunities and/or external pressures as each other?
How much do you feel that___ has a positive social status compared to the other residences here on campus?
How included do you feel within ___?
How much do the residents of ___depend upon each other?
How much do the residents of___ share the same goals and ambitions with each other?
How well do you know the other residents in ___?
How much of a sense of harmony is there within ___?
How similar do you feel the residents of___ are to each other?

To what extent have you experienced the following emotions today? (1-7)
Worried/anxious
Pleased
Joyful
Angry or hostile
Enjoyment/fun
Unhappy
Depressed
Happy
Frustrated

Please answer each question below about your flat or floor as a whole using the scales provided. (0-10)
How much do you socialise within flat (or floor) ___?
How well do you know the people in the flat next door or floor immediately above or below?
How well do you know the other people in flat (or floor) ___?

How much are the people in flat (or floor) ___concerned with helping and supporting one another?
How much do you and your flatmates acknowledge one another when passing around the residences?
How much is there a sense of belonging within flat (or floor) ___?
Approximately how many visitors does ___have on an average day? 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20+

TIMES 1 AND 5 ONLY:

5. This section also refers to the residences and flat or floor in which you live on campus. Please indicate the following:
5.1. Is your flat/floor designated for: -
| Families | Postgraduates | Disabled | Other particular If other particular, please specify
5.2. Do you have a shared bedroom? - Yes No
5.2a Is you room en-suite? Yes No
5.3. Do you have a sink in your bedroom? - Yes No
5.4. With how many people do you share your flat or floor? - 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30+
5.5. Is there a common sitting area in your flat/floor, such as a dining room or lounge? - Yes No
5.6. If yes, how many people share it? - 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30+
5.7. If yes, how much time do you spend there on average? - More than 4 hours a day One and a half to 4 hours a day Up to one and a half hours a day A few times a week Around once a week A few times a month Hardly any
5.8. How often, on average, do you coincidently bump into your flatmates in or around the flat? - More than 10 times a day 5-10 times a day 2-4 times a day Once a day A few times a week Around once a week A few times a month Hardly any
5.9. Is there a common area outside your flat or block that is shared by your flat and others? - Yes No
5.10. If yes, how many flats share it? - 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30+ 5.11.
If yes, how much time do you spend there? - More than 4 hours a day One and a half to 4 hours a day Up to one and a half hours a day A few times a week Around once a week A few times a month Hardly any
5.12. How often, on average, do you coincidently bump into people from who are not your flatmates, in or around the residences? - More than 10 times a day 5-10 times a day 2-4 times a day Once a day A few times a week Around once a week A few times a month Hardly any

5. This section also refers to the residences and flat or floor in which you live on campus. Please indicate the following: (0-10)
5.13. How well do you get on with your flatmates?
5.14. How well do you get on with the other people in ___?
5.15. How happy are you with your flat or floor?
5.16. How happy are you with ___?
5.17. How satisfied are you with your flat or floor?
5.18. How satisfied are you with ___?

5.19. How attached are you to your flat or floor?
5.20. How attached are you to ___?
5.21. If you look out of the window of your common area or kitchen, can you see...(Not at all… just… clearly: 1-5)
...into other flats' kitchens or common rooms?
...into other flats' bedrooms?
...the path outside?
...a vehicle road?

Please use the scale below to respond to each statement: (1-5)
I find I get intensely involved in many of the things I do each day
I believe I have discovered who I really am.
I think it would be ideal if things came easily to me in my life.
My life is centred around a set of core beliefs that give meaning to my life.
It is more important that I really enjoy what I do than that other people are impressed by it.
I believe I know what my best potentials are and I try to develop them whenever possible.
Other people usually know better what would be good for me to do than I know myself.
I feel best when I am doing something worth investing a great deal of effort in.
I can say that I have found my purpose in life.
If I did not find what I was doing rewarding for me, I do not think I could continue doing it.
As yet, I've not figured out what to do with my life.
I can't understand why some people want to work so hard on the things that they do.
I believe it is important to know how what I'm doing fits with purposes worth pursuing.
I usually know what I should do because some actions just feel right to me.
When I engage in activities involving my best potentials, I have this sense of really being alive.
I am confused about what my talents really are.
I find a lot of the things I do are personally expressive for me.
It is important to me that I feel fulfilled by the activities that I engage in.
If something is really difficult, it probably isn't worth doing.
I find it hard to get really invested in the things that I do.
I believe I know what I was meant to do in life.

TIME 1 ONLY:
7. Finally, please provide the following information:
7.1. Age in completed years -
7.2. Gender - Male Female
7.3. Nationality -
7.4. For how many years have you lived in the UK -
7.5. Are you a first year, undergraduate student - Yes No
7.6. If no, please specify -
7.7 Do you belong to a religious denomination? Yes No
7.8 If yes, which one: Christian Jew Muslim Hindu Buddhist Other If other, please specify -
7.9 What is your ethnic group? White Black - African Black - Caribbean Asian - Chinese Asian - Indian/Pakistani/Bangladeshi Other If other, please specify -

TIME 5 ONLY:

Please answer how much you agree with the following questions using the scale provided. (0-10)
For the size of the flat, it feels like there are too many people living here.
It feels crowded when everyone who lives in the flat is here.
There is enough space in the flat for all the people who live here.
I can easily control how often I see my flatmates.
If I didn't want to see anyone, I could easily avoid people here.
It's difficult to have any privacy within the flat.
My flatmates and I see ourselves as a group.
I think other people perceive my flatmates and me as a group.
It feels like my flatmates and I have formed a group together.
The residents of ___see ourselves as a group.
I think other people perceive ___residents as a group.
It feels like the residents of___ have formed a group together.

In the past month, how often have you (1-6)
Wished that you could find a place to be alone in your flat?
Stayed in your bedroom to avoid interacting with your flatmates?
Avoided seeing or interacting with any of your flatmates?

2. Have you moved flat this term? | Yes | No
- If YES, on what date did you move?

3. Compared to others at this university, how would you describe yourself in terms of spare money (after fees, books, rent, etc)? Much poorer than average Slightly poorer than average About average Slightly richer than average Much richer than average

Thank you for your help in our research.

We will be in touch shortly about the next questionnaire./ We will contact the winners of the prize draws at the beginning of next term.

APPENDIX 2

The questionnaire below has been reproduced from the original online version, which was the materials used for the study reported in Paper 2.

TIME 1 AND 2 QUESTIONNAIRE:

Groups and categories of people

We will ask you to reply to a series of questions concerning the groups and categories of people that you consider yourself to be a member of. Please read and consider each question carefully, but do not agonise over your answers. There are no right or wrong answers, and first impressions are usually fine. Just think about what best reflects your own opinions or feelings.

The questionnaire is anonymous and will be analysed only by the research team. Please do not put your name anywhere on the questionnaire. However, we would like to conduct one short follow up study in the new year. Please provide your Sussex email address so that we can send you the future questionnaire and award you course credits. Please type this carefully.

Your email:

By clicking the 'continue' button at the bottom of the page you are giving your free consent to take part in the study.

Please be aware of the following:

- If you decide not to participate, your decision will be accepted.

- You may withdraw from the study at any time. You do not have to give a reason for the withdrawal.

Section 1: Groups and Categories of People

Below are 10 blank spaces divided into two blocks of five.

In the first block, please write down some small groups that you are a part of. These can be anything from formal organisations to informal friendship groups but you should know all or most of the members of the group personally.

In the second block, please write down some categories of people you consider yourself a member of. These can be very large and inclusive such as race or religion, or more exclusive, such as a Sussex psychology student. You do not have to know all the members of the category that you write down, you only need to consider yourself a member of that category.

You can write your answers as they occur to you without worrying about the order. Once you have done this, please click the 'continue' button to move onto the next page of questions, answering each question 10 times, once for each item you list on this page. Please DO NOT click the back button on your web browser or press the backspace key whilst completing the questionnaire.

Small Groups:
1.
2.
3.
4.
5.
Categories of People
6.
7.
8.
9.
10.

[THESE ANSWERS WERE DISPLAYED BELOW THE FOLLOWING ITEMS, WITH 0-10 RATINGS SCALES NEXT TO THEM, ANCHORS WERE *NOT AT ALL…MODERATELY…EXTREMELY*]

How much does being a member of each group or category give you a feeling of "belonging"?
How much do the members of each group or category share the same goals and ambitions as each other?
How well do you know the other members of each group or category?
How much of a sense of inclusion do you get from each group or category?
How much do the members of each group or category depend upon each other?
How much do you feel that you are distinguished - in any way - from the other members of each group or category?
How close do you feel with the other members of each group or category?
How much do you feel like you have a particular role or position in relation to the other members of each group or category?
How much do you feel that there is any sort of boundary between yourself and the other members of each group or category?
How important is being a member of each group or category to you?
How different from the other members of each group or category do you feel in terms of your personal characteristics?
How sociable are you within the group or category?
How similar do you feel to the average member of each group or category?
How much of a sense of harmony is there within the group or category?
Within each group or category, how similar do you feel the members are to each other?
For each group or category, how much do you see yourself as a typical member?
How much time do you spend with the other members of the group or category?
How much of a connection do you feel there is between you and the other members of each group or category?
How easy do you think it would be to enter or leave the group or category?
How much do you identify with each group or category?
How much do you feel that the members of each group or category have the same opportunities and external pressures as each other?
How much do you feel that the members of each group or category are as one?
How much do you feel that the members of each group or category are a unit?
How much of a choice would you say you had about becoming a member of each group or category?
In everyday situations, how closely do you think your thoughts and behaviours match those of a typical member of each group or category?
When you answer the next few questions, for each group or category you listed, please try to think of one or more related groups or categories but ones that you are not a member of.

For example, if you listed 'nurse', then you might think of 'patients', 'doctors' and 'hospital wardens'; if you listed your group of friends, you could think of other groups of friends that you are not a part of.

How different do you think each group or category you listed is from the similar groups or categories that you were just asked to think of?
How much do you feel that each group or category is distinguished - in any way - from the other groups or categories you were just asked to think of?
How much do you feel each group or category has a particular role or position in relation to the other groups or categories you were just asked to think of?
How much do you feel that there is any sort of boundary between each group or category and the other groups or categories you were just asked to think of?

How different do you feel each group or category is from the other groups or categories you were just asked to think of in terms of its characteristics?
Finally, please provide the following information:

1. Age in completed years (in numbers)-
2. Gender - Male Female
3. Nationality -
4. What is your ethnic group? White Black - African Black - Caribbean Asian - Chinese Asian - Indian/Pakistani/Bangladeshi Other If other, please specify -

Thank you for your help in our research.
You will automatically be awarded 2 course credits within the next few days.
We will email you in the New Year with the final questionnaire.

TIME 2 ONLY:

Below are five statements that you may agree or disagree with.
Using the scale provided, please indicate your agreement with each item by checking the appropriate box.
Please be open and honest in your responding. (Strongly disagree…strongly agree: 1-7)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

APPENDIX 3

Introduction, identity aspects questions, and demographic items in the English version of the questionnaire used in the study reported in Paper 4.

BELIEFS, THOUGHTS AND FEELINGS QUESTIONNAIRE

We ask you to reply to a series of questions concerning your beliefs, thoughts and feelings about yourself and other people.

Please read and consider each question carefully, but do not agonise over your answers. There are no right or wrong answers, and first impressions are usually fine. Just think about what best reflects your own opinions or feelings.

The questionnaire is anonymous and will be analysed only by the research team. Please do not put your name on the questionnaire.

Please sign the following declaration:

I have been asked to participate in this research project and I give my free consent by signing this form.

I understand that:
If I decide not to participate, my decision will be accepted.

I may withdraw from the study at any time. I do not have to give a reason for the withdrawal.

Signature .....
Date.....

THANK YOU VERY MUCH FOR YOUR HELP WITH OUR RESEARCH.

Section 1: Who are you?

In the numbered spaces below, please write down 8 things about yourself. You can write your answers as they occur to you without worrying about the order, but together they should summarise the image you have of who you are.

You can write anything you think describes you well. Your answers might include social groups or categories you belong to, personal relationships with others, as well as characteristics of yourself as an individual. Some may be things that other people know about, others may be your private thoughts about yourself. Some things you may see as relatively important, and others less so. Some may be things you are relatively happy about, and others less so.

1.
2.
3.
4.
5.
6.
7.
8.

[THIS FOLDED OUT TO THE SIDE SO THEY COULD BE SEEN WHILST ANSWER THE QUESTIONS BELOW, ON A SET OF EIGHT 11-POINT (0-10) SCALES, ONE FOR EACH OF THE IDENTITY ASPECTS]

2.1 **How important is each of these things in defining who you are?**

2.2 **How happy or unhappy do you feel about each of these things?**

2.3 **How much do you show people that you are each of these things in your everyday actions?**

5.5 **How much do you feel that each of these things distinguishes you—in any sense—from other people?**

8.2 **How much does each of these things give you a particular role or position in relation to others?**

8.4 **How much does each of these things create any sort of boundary between yourself and others?**

8.6 **How much does each of these things make you different from others in your personal characteristics?**

Section 9

Finally, please could you supply the following personal details:

9.1 Age (in completed years): ……

9.2 Gender: Male |__| Female |__|

9.3. Country of birth: ……..

9.4 For how many years have you lived in the UK?…….

9.5 What is your nationality? ……

(If dual or mixed, please describe as accurately as possible)

9.6 At what age...

- did you start full-time education (school)? ……

- did you finish full-time education? ……

9.7 Compared to other people in the UK, how would you describe your family's level of financial wealth? (please tick)

Very poor |__| Above average wealth |__|

Moderately poor |__| Moderately rich |__|

Below average wealth |__| Very rich |__|

Average wealth |__|

9.8 Do you belong to a religion or religious denomination?

If yes, which one? (please tick)

No: do not belong to a denomination |__|

Yes: Christian |__|

Yes: Jew |__|

Yes: Muslim |__|

Yes: Hindu |__|

Yes: Buddhist |__|

Yes: Other |__| Please specify: …… 28

9.9 What is your ethnic group? (please tick)

White |__| Black – African |__|

Black – Caribbean |__| Asian – Chinese |__|

Asian – Indian/Pakistani/Bangladeshi |__|

Other (please specify): ……

9.10 Which one of the following BEST describes the place where you live? (please tick)

City |__|

Smaller / Average Town |__|

Village / Rural |__|

9.11 What is the name of the place where you live? ……

9.12 For how many years have you lived in this place? ……